The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL FINANCE CORPORATION
MULTILATERAL INVESTMENT GUARANTEE AGENCY

Scientific research: Latvia: "Who is Unemployed, Inactive or Needy? Assessing Post-Crisis Policy Options"

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"Complex support measures" No. 1DP//1.4.1.1.1./09/IPIA/NVA/001

Latvia: Who is Unemployed, Inactive or Needy? An Assessment of Post-Crisis Policy Options

Summary of Advisory Services Activities

The project examines the situation of the long-term unemployed and inactive population and looks at how tax, benefit and employment policies interact to protect low-income individuals while providing incentives to work. The objective of the research is to provide background analysis for the Government of Latvia to motivate reforms to its tax and benefit system, and employment programs, including active labor market programs. The project consists of the following pieces of analysis:

i. Profiling of unemployed, inactive and low-income people;
ii. A comparison of expenditure and performance of social protection programs with those of other EU countries;
iii. Analysis of the incentive structure created by the tax and benefit system for people to take up work;
iv. A review of key design parameters and legislation for social assistance programs in Latvia;
v. An evaluation of active labor market programs (ALMPs) and related social benefit programs;
vi. A diagnosis of labor market and social conditions; and
vii. A summary of findings and policy options.

The outputs consist of a set of notes and presentations that have been delivered to the Government of Latvia over September 2012 to May 2013. Presentations of the results were given by the team in October 2012, March 2013 and May 2013. Based on the request of the Government, certain aspects of the analysis were expanded during the analysis, in particular the coverage of active labor market programs (ALMPs). Also, the Ministry of Finance has additional requests for the tax-benefit analysis that the team incorporated into the analysis. We are in additional carrying out an analysis of the health safety net that was not part of the original agreement and for which the results will be ready in the Summer of 2013.

The summary of findings and policy options is given in the format of a long presentation (with links to the background papers) and a one-page executive summary on agreement with the Government (it was felt this format would be more accessible than having another paper to read). The Government requested that we present the full-range of policy options for them to use as background to consider benefit and tax reforms.

A large part of the work for this project consisted of building a large panel database linking the (a) Population Registry (giving information on family relationships); (b) Social Assistance Registry (SOPA) (giving information on access to social assistance programs); (c) State

Employment Agency (BURVIS) (giving information on participation in employment programs); and (d) Social Security Registry (VSAA) (giving information on the registered employed and unemployed, included wages, history of employment status and education). From May 2012 until February 2013, the World Bank team (including Professor Hazans) built this linked administrative database in collaboration with the Ministry of Welfare and the State Employment Agency. It is the kind of database that, for example, the Nordic countries have been building to do research to provide evidence for policy making on unemployment and social assistance policy. The richness of the data has allowed us to examine benefit dependency and the impact of ALMPs. The Latvians intend to build on this to create a permanent data system for monitoring and control.

The detailed results of the study are due to be presented in Latvia on June 3 and 4, 2013. Please find below a list of the outputs circulated for virtual review. The Government of Latvia will make these outputs available in English and Latvian on the Ministry of Welfare website.

Note 1: Profiling of People with No or Limited Labor-Market Attachment (Céline Ferré, Herwig Immervoll, Emily Sinnott)

Note 2: Expenditure and Performance of Welfare Benefits and Employment Programs in Latvia (Victoria Strokova and Tomas Damerau)

Note 3: Financial Incentives of the Tax and Benefit System in Latvia (Victoria Strokova and Tomas Damerau)

Note 4: Latvia GMI Program: Main Design Characteristics and Comparison with Minimum Income Schemes in Other EU Member States (Boryana Gotcheva and Emily Sinnott)

Note 5: Latvia: Best Practices and Constraints In Provision of Training Services and Employment Incentives (Arvo Kuddo)

Note 6: Poverty, Inequality, and the Social Impact of the Financial Crisis in Latvia (Katrin Gasior, Orsolya Lelkes (with Eszter Zólyomi))

Note 7: Evaluation of active labor market programs in Latvia (Mihails Hazans and Jekaterina Dmitrijeva)

Note 8: Distribution of Health Subsidies under the Emergency Social Safety Net and Their Impact on Unemployed (Charles C. Griffin and Irina Mozhaeva)

Presentation 1: Structural or cyclical? Unemployment in Latvia since the 2008-09 Financial Crisis (Mihails Hazans)

Presentation 2: Summary of findings and policy options (Emily Sinnott)

Executive Summary (1-page) (Emily Sinnott)

Latvia: Who Is Unemployed, Inactive or Needy? An Assessment of Post-Crisis Policy Options

The Latvian economy has begun its recovery from recession, with positive real GDP growth having resumed in 2011, but the effects of the crisis on the labor market are far from over. Labor market demand has yet to rebound; unemployment is still high and labor market participation lower than pre-crisis. With fewer jobs on offer, the risk of staying unemployed for over a year is real for a substantial number of people. Indeed, the share of long-term unemployed in those out of work remains over 50 percent. Getting these people back to work is a critical challenge for the economy. Not only is this key for reducing social exclusion and poverty, but given the aging and shrinking population, increasing both labor participation and labor productivity is a critical challenge for long-run growth.

The World Bank has collaborated with the Government of Latvia on a study to examine policies to combat long-term unemployment and to draw people into the workforce. In examining the issue of unemployment and the protection of low-income people in Latvia, the Government joins the practice of countries such as the U.K., the Netherlands and Nordic countries in using detailed individual-level administrative data for evidence-based policy analysis.

Among others the study seeks to answer the following questions: Who are those in the population who have had no work or unstable work? Is there evidence of benefit dependency for those who are out of work? What options are there for the tax and benefit system to increase protection and work incentives? How are employment and training programs performing and what lessons can be drawn for future policy directions? Some of the main findings of the study are as follows:

- People who had unstable or no work over the period 2007 to 2010 consist of groups of people with very different socio-demographic characteristics. It is not possible to generalize about individuals who experienced labor market difficulties. Those aged 50 and over—often with chronic illness of disabilities—constitute a large share, as do youths with low education, mothers with household responsibilities and older self-employed males.

- There is little evidence of large-scale dependence on benefits. Benefit programs for those out of work are not generous and have low coverage (relative to the EU). Forty percent of beneficiaries access guaranteed minimum income benefits just one time and for a short time period: these benefits act as a stop-gap for many and not a permanent income source. In fact, if anything the adequacy of last resort benefit and coverage are a concern. Maintaining and expanding the links between getting benefits and participating in labor market activation policies, such as training, is an important way in which to ensure that the unemployed participate in employment services.

- Spending on benefit programs targeted at low-income groups is low—both compared to other countries and compared to money spent on benefit programs that are not targeted (universal).

- The tax and benefit system could be modified to be more generous for low-income households. In particular, a more gradual phase out of benefits is recommended rather than the current system where minimum income recipients lose one Lat of benefits for each additional Lat they earn. Some OECD countries combat this by putting in place benefits for low-income individuals who are working.

- Results of the evaluation of labor market programs put in place by the Government to get people back to work are encouraging; these show that these programs improve participants' employment rates. However, a substantial variation in outcomes is found between types of programs and within each type.

More detail can be found in the background papers for the study at **ADD Ministry of Welfare URL**

Latvia: Who is Unemployed, Inactive or Needy? An Assessment of Post-Crisis Policy Options

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Summary Findings and Policy Options

Ministry of Welfare, Riga, May 15, 2013

The World Bank

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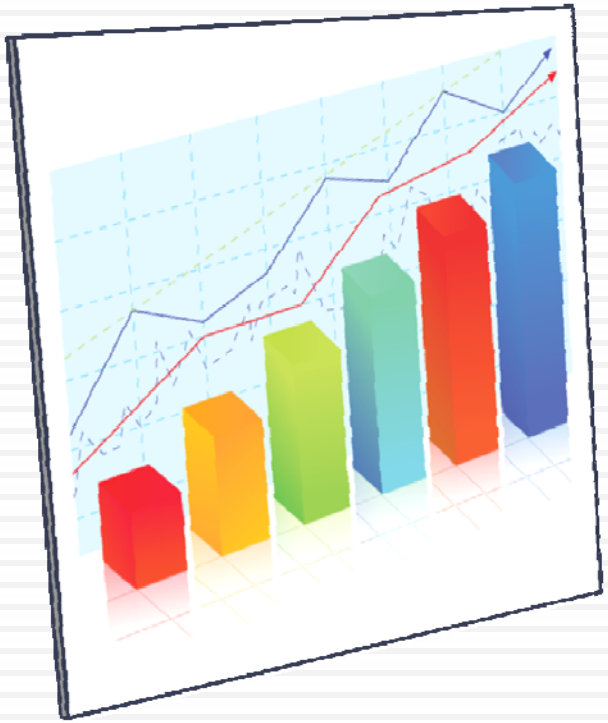
I. Context for the Study



Why do a study on unemployment and the tax-benefit system?

Background Papers/Presentations:

1. Hazans, Mihails, (2013). Structural or cyclical? Unemployment in Latvia since 2008-09 Financial Crisis, Presentation.
2. Katrin Gasior, Orsolya Lelkes (with Eszter Zólyomi), (2013). Poverty, Inequality, and the Social Impact Of The Financial Crisis In Latvia

Motivation for Study

- Labor market has recovered since the crisis, but unemployment still high and participation lower than pre-crisis
  - Concern on long-term unemployment and benefit dependency
  - Growth issue—particularly given aging demographics—need to maximize labor market participation and labor productivity
- Aim to increase living standards (given high poverty and inequality)
  - Strategy of shared prosperity and to support families
  - Government expanded safety net during the crisis and increased spending: What policies moving on from crisis measures (emergency social safety net)?

Motivation for Study

- In collaboration with World Bank, Government of Latvia embarked on study to look at long-term unemployment
  - Objective is to have background analysis to inform tax, benefit and ALMP Design
  - Evidence-based policy marking
    - Build on approach of Government-supported evaluation of crisis measures (emergency public works program)
    - Government of Latvia invested significant effort in producing a detailed database on benefits and employment-unemployment spells
    - Latvia joins countries such as the U.K., the Netherlands and Nordic countries in using administrative data for evidence-based policy analysis

Big Effort by Government to Build Database Linking Information From Multiple Sources

1. Population Registry
   - Family relationships
2. Social Assistance Registry (SOPA)
   - Access to social assistance programs
3. State Employment Agency (BURVIS)
   - Unemployment registration
4. Social Security Registry (VSAA)
   - Wages and employment status

Economic Recovery Has Begun, But Unemployment Remains High

- Economy has begun its recovery from recession (positive real GDP growth resumed in 2011)
- Effects of the crisis on the labor market and social situation are far from over
  - Unemployment situation has improved a bit, with unemployment falling from 19.8 percent in 2010 to 14 percent in 2012.
  - Registered unemployment echoes LFS-based data
  - Share of the working age population has fallen sharply since before the crisis
  - Between last two population censuses (2000-2011), 13 percent fall in population (negative net migration = around 190,000)

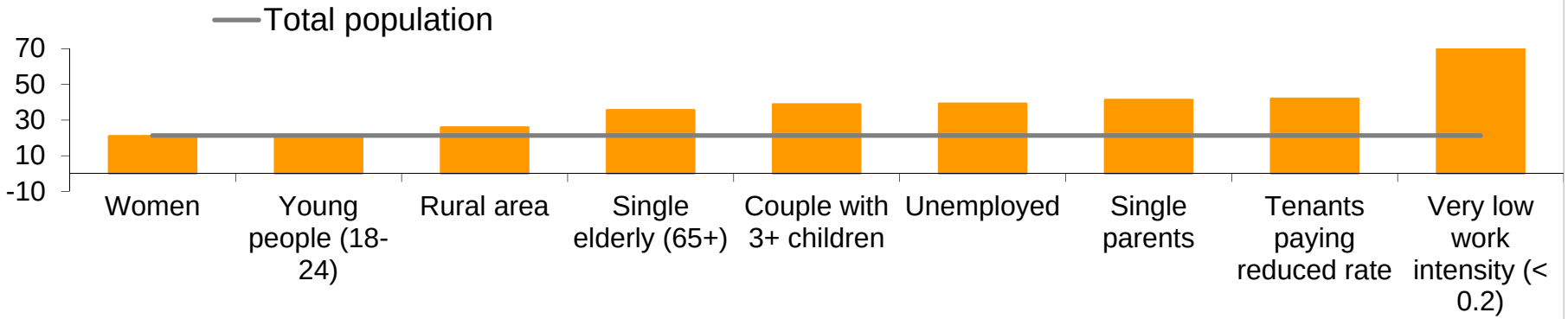
	2008	2009	2010	2011	2012
Real GDP growth rate	-3.3	-17.7	-0.9	5.5	5.6
Employment rate*	75.8	67.1	65.0	66.3	…
Unemployment rate	8.0	18.2	19.8	16.2	14.0

*The employment rate is calculated by dividing the number of persons aged 20 to 64 in employment by the total population of the same age group.
Source: Eurostat online

Getting More People Back to Work is Critical for Long-run Growth, and Reducing Poverty and Inequality

- Getting more people back to work is critical for reversing the deepening of poverty and increasing polarization that has occurred since 2007
  - Nearly two-thirds of the poor population is made up by people who live in households with low work intensity. 28% of the poor population are unemployed.
  - "Working poor" do exist in Latvia, even though the share of employed people is lower (26%) within the poor population than in the general population (46%).

Low work intensity is strongly associated with being poor



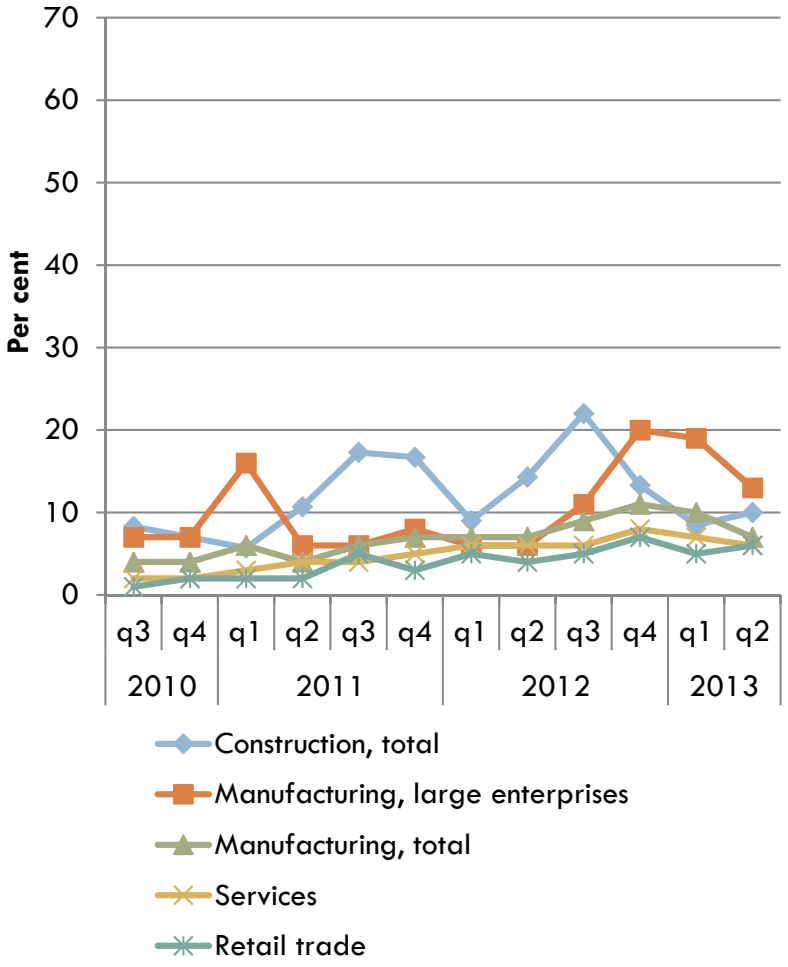
At-risk-of-poverty rate of specific social groups in Latvia (%), 2009

Labor Demand Has Yet to Fully Recover and Long-term Unemployment is a Concern

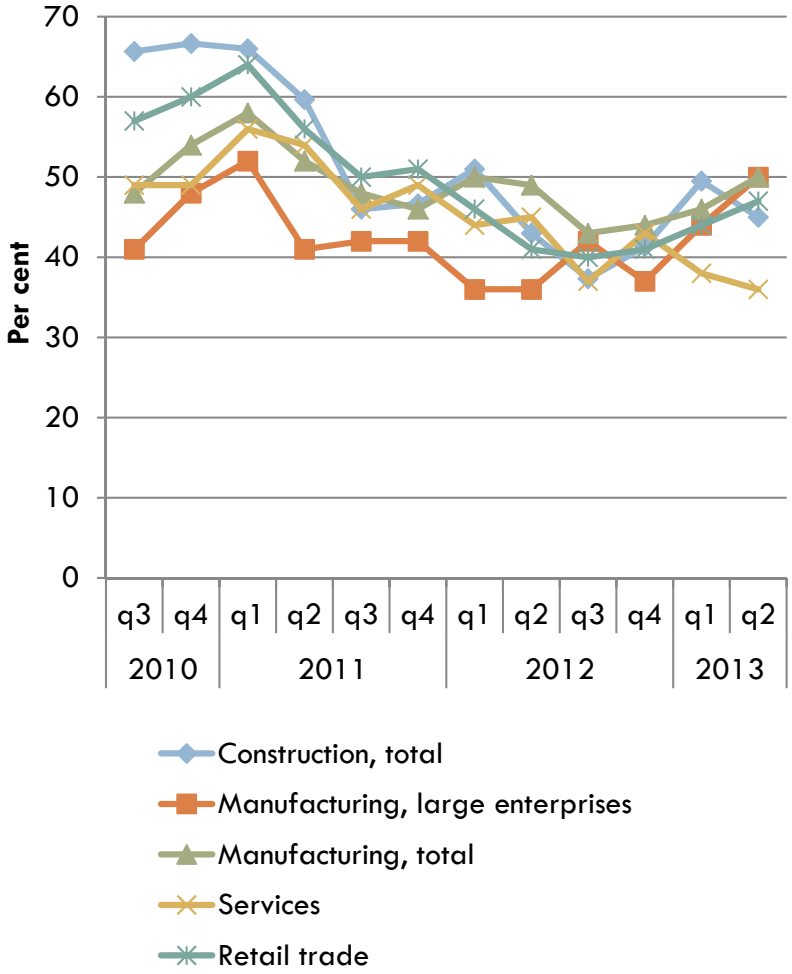
- Labor demand has yet to recover fully recover
  - Few businesses report labor shortages
  - The level of vacancies in Latvia is very low – in comparison both to the pre-crisis levels and to other European countries
  - The available vacancies are filled quickly which is not consistent with the idea of notable mismatches between supplied and demanded skills
- Long-term unemployment and drop in labor market participation is a concern and protection/increasing skills of workforce crucial for future growth

Enterprises report insufficient demand rather than a shortage of labor as limiting factor in Latvia, 2010-2013

Shortage of labor

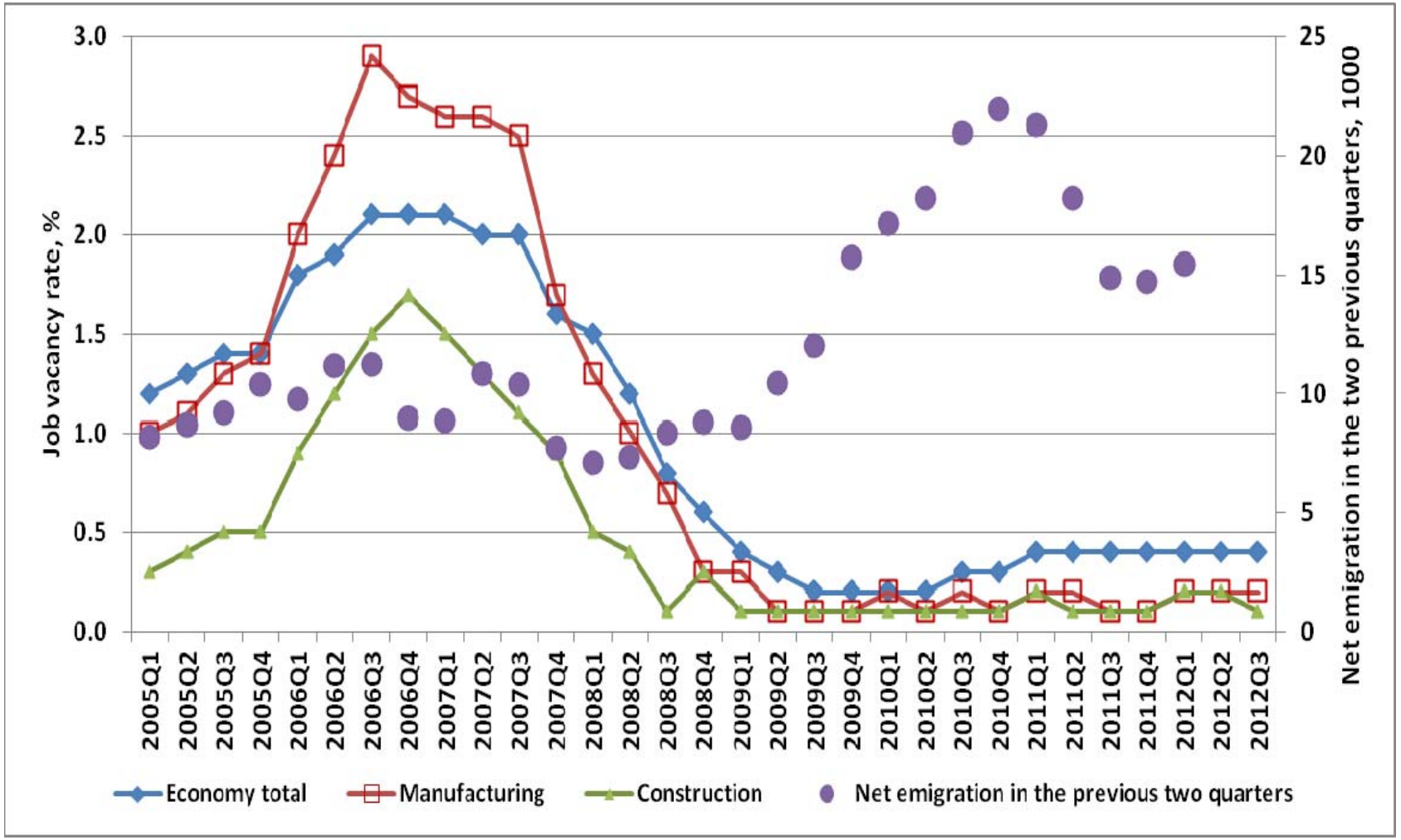


Insufficient demand



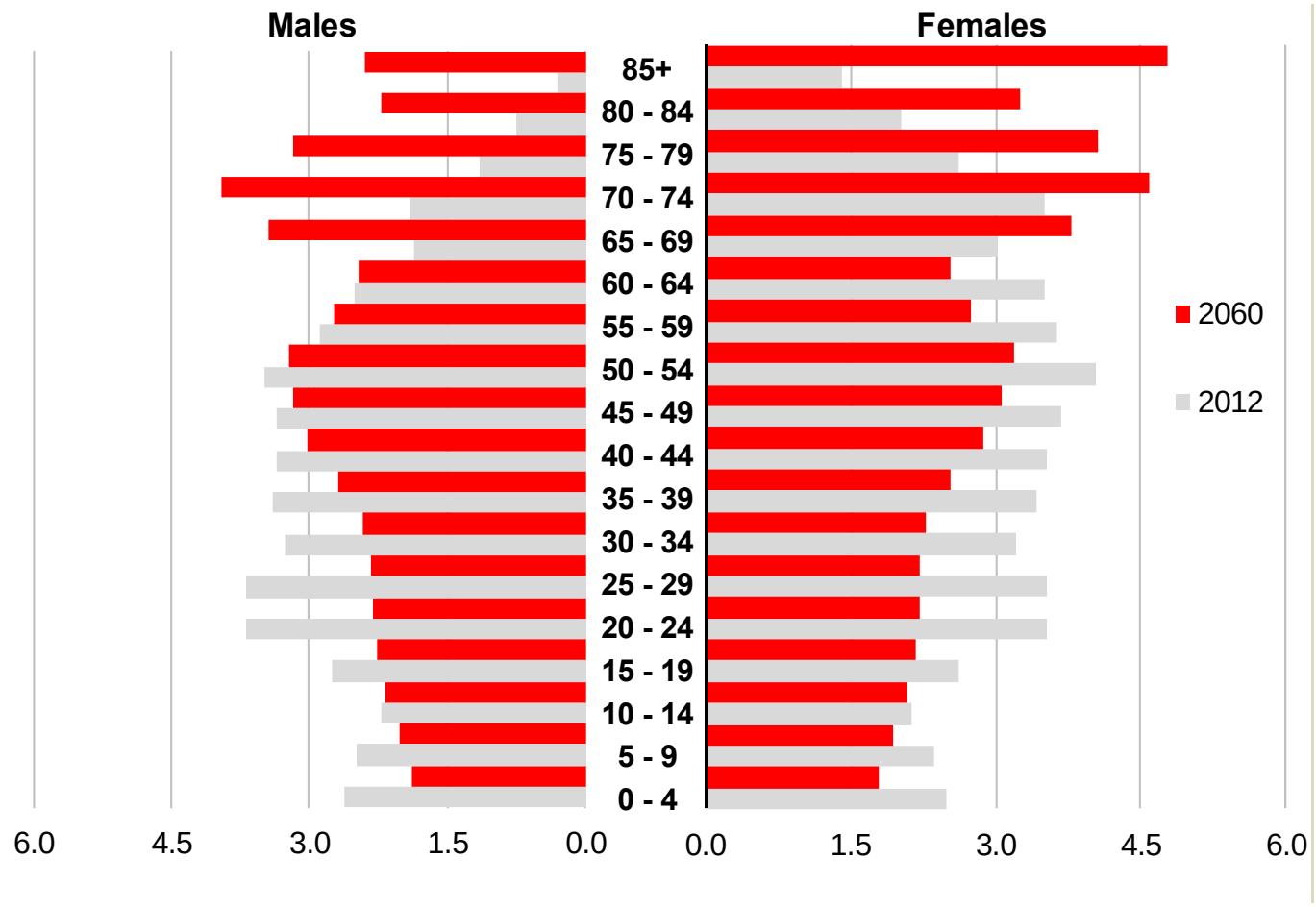
Source: Business Tendencies (Economic Sentiment) survey, CSB

Since 2009, Job Vacancy Rates are Extremely Low; Despite the Need to Replace Emigrants



Demographic Changes Increase the Impetus to Maximize Labor Force Participation

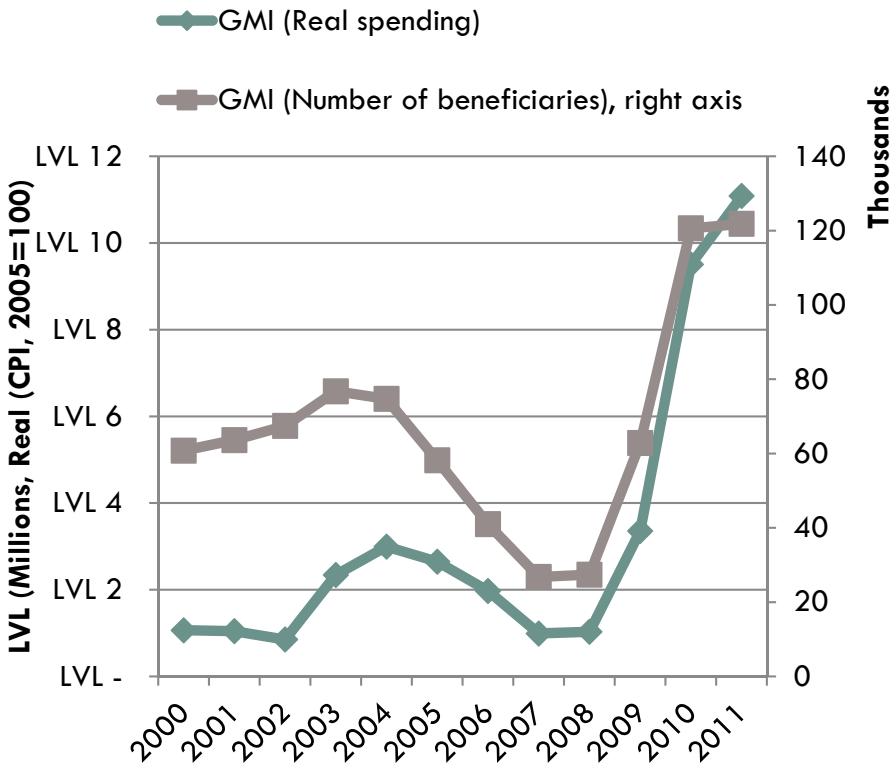
Latvia: Age Distribution of Population, 2012 vs. 2060 (in percent)

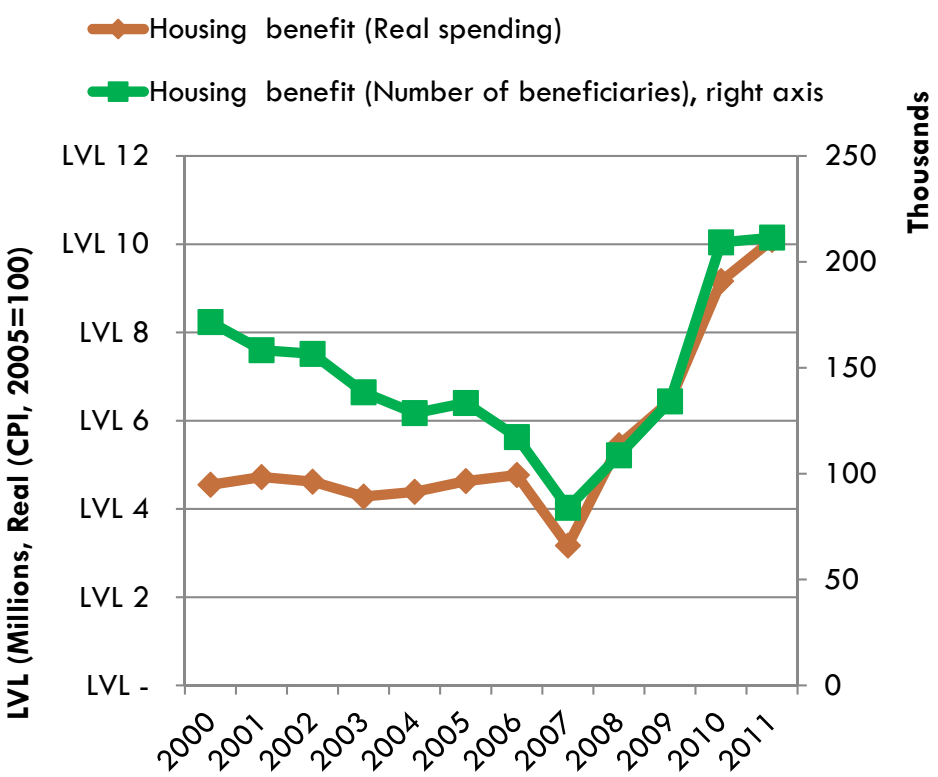


Source: WB calculations based on CSB population data and Eurostat.

Unlike In Some Other Countries With Large Austerity Programs, the Safety Net in Latvia Did Expand During the Crisis

…but policy adjustments were needed





Source: Administrative data.

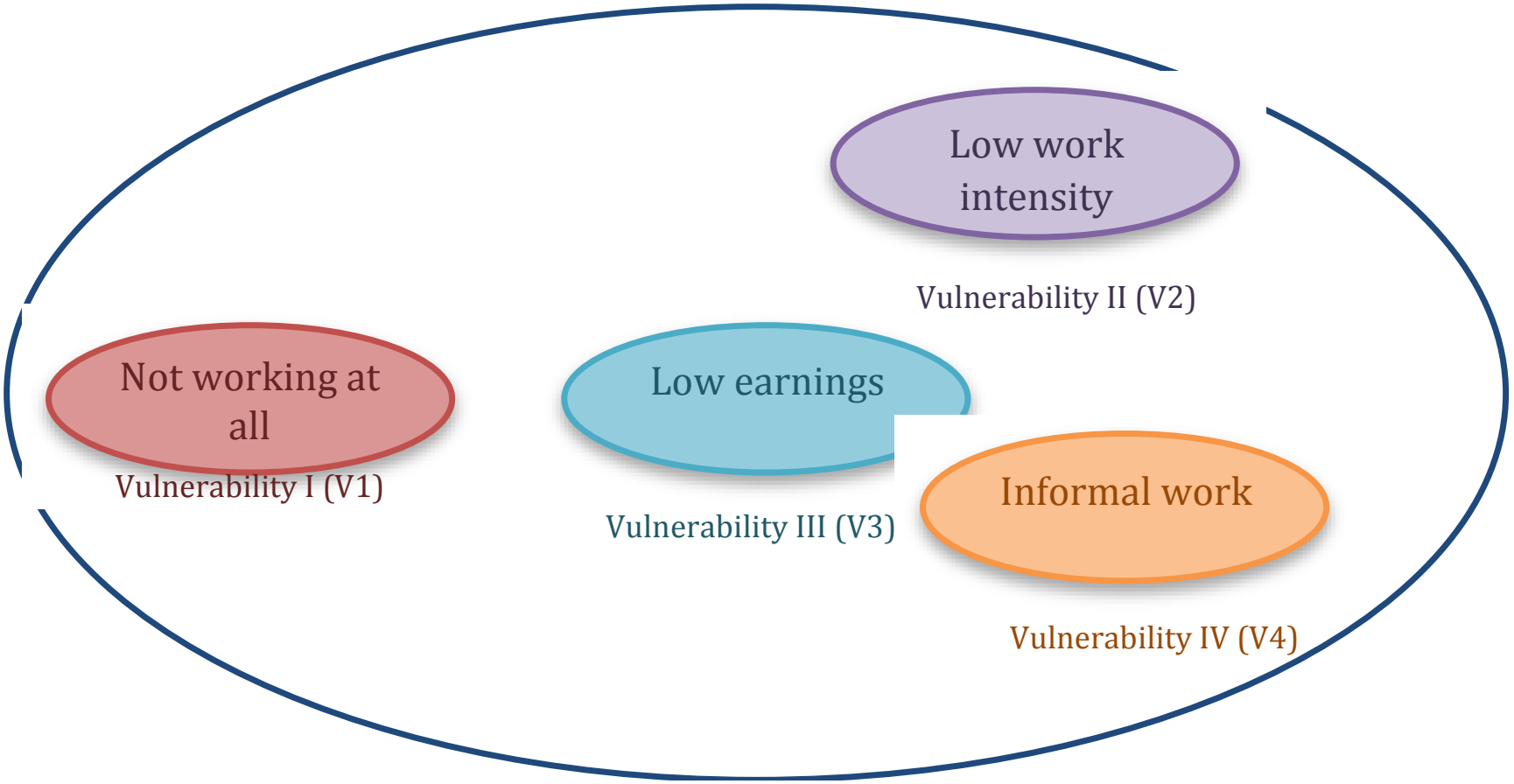
II. Profiling Those with Persistent Labor Market Difficulties

Which groups are suffering from no or unstable work?

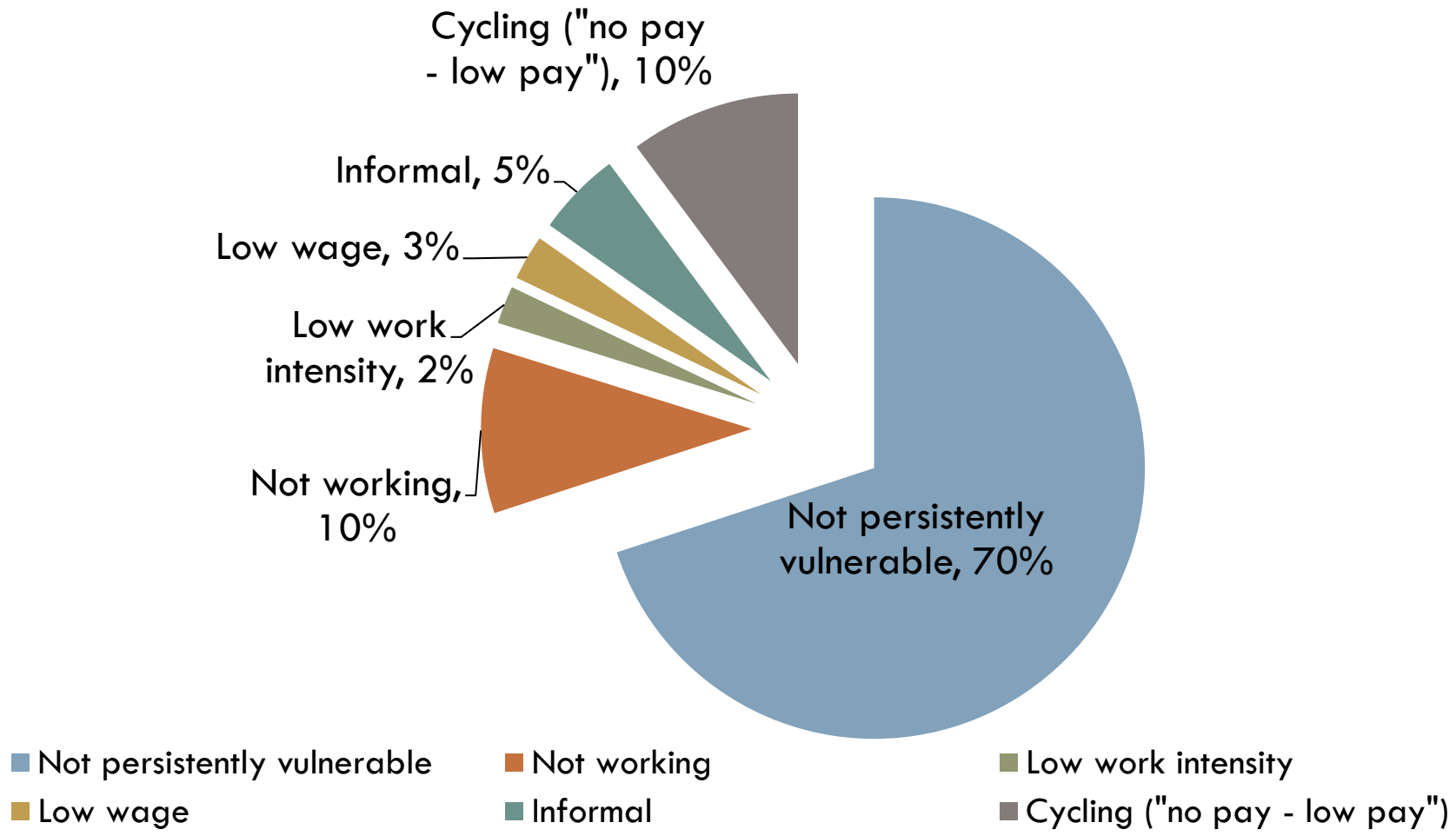
Background Papers/Presentations:

1. World Bank (2013). Profiling of People with No or Limited Labor-Market Attachment (Céline Ferré and Herwig Immervoll).
2. World Bank (2013). Latvia: Best Practices and Constraints In Provision of Training Services and Employment Incentives (Arvo Kuddo).

Four Types of No/Unstable Work…



2007-2010: Broad Categories of No/Unstable Work



NO/UNSTABLE WORK: DETAILED GROUPINGS

Group size

"single older unemployed/disabled "

. Old/Middle-aged 45-61 y.o.
. Single
. 10+ yrs. experience
. Low education
. Many disabled/unemployed
. Chronic illness

22%

"single young males with low education"

. Young 20-29 y.o.
. Men
. Never married
. Very low education
. Unemployed
. No children
. Rural

18%

"older unemployed, fit for work"

. Older 50+
. Married
. 10+ yrs. experience
. Low education
. Unemployed/Low earnings /Infrequent work

14%

"stay-at-home mums with small child"

. Younger women 25-39 y.o.
. Married/union
. Higher education
. Child < 6 y.o.
. Rural
. Working partner

11%

"poorly educated, rural male breadwinner"

. 30-39 y.o. men
. Married/union
. Very Low education
. 10+ yrs. experience
. Child < 6 y.o.
. Rural
. Partner not working

11%

"self-employed older men"

. Older men 40-54 y.o.
. Married
. 10+ yrs. experience
. Self-employed
. No child in household
. Informal

9%

"disabled older women with working partner"

. Older women 50+
. Married
. Lower education
. 10+ yrs. experience
. High disability (most in sample), inactive
. Chronic illness
. Working partner

6%

"highly educated stay-at-home mums"

. 30-39 y.o. women
. Married
. Higher education (most)
. 10+ yrs. experience
. Children
. Urban
. Working partner

6%

"disabled older women, partner not working"

. Older women 50+
. Married
. Lower education
. 10+ yrs. experience
. Unfit for work, inactive
. Large share retired early
. Chronic illness
. Partner not working

4%

Policy Options

- Desirable targeting mechanism: combined strategy that aims at tackling those at risk of persistent labor market difficulties and economic hardship
  - Hardest to activate: Older and/or disabled pre-retirement age group; and large group of young, less educated unemployed
  - Easier to activate?: the more educated older male self-employed population and well-educated stay-at-home moms
- Use **the link between benefits and activation policies** as an instrument to bridge unemployed to employment services
- Implement an activation strategy to target each of the identified groups

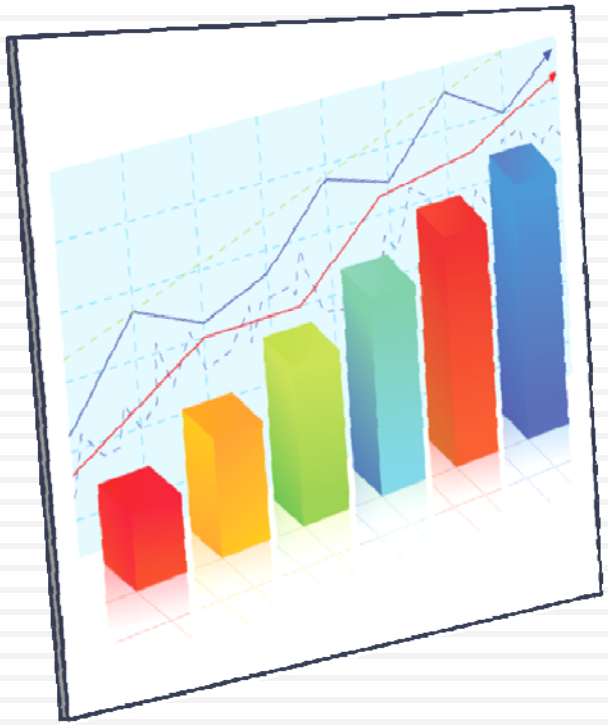
EXAMPLES OF EMPLOYMENT SERVICES AND MEASURES TO TARGET PARTICULAR GROUPS OF JOB SEEKERS

Target Groups	Relevant Employment Services and Measures
Individuals with unfavorable labor market prospects	Job search courses, job clubs, vocational guidance, counseling and monitoring, and sanctions in the case of noncompliance with job search requirements (see the potential list of employment services below)
Most job seekers, in particular, for participants with better labor market prospects and for women	Training, including classroom training, on-the-job training, apprenticeship and internship programs, and work experience. The measures can either provide a more general education (such as e.g. language courses, basic computer courses or other basic courses) or specific vocational skills (e.g. advanced computer courses or courses providing e.g. technical and manufacturing industry skills)
Long-term unemployed and more disadvantaged individuals; the disabled, first-time jobseekers, the long-term unemployed, persons over 50 years of age who are capable of work	Wage subsidies: financial incentives are either provided directly (through direct wage subsidies) or indirectly (through social security waivers and reductions in labor taxes)
A higher-skilled segment of the unemployed, and unemployed workers who have entrepreneurial skills, such as highly educated prime-aged men	Small business assistance programs, self-employment grants and sometimes also advisory support for a fixed period of time
The most disadvantaged individuals	Direct employment programs in the public sector, focusing on the direct job creation and provision of public works or other activities that produce public goods or services

EXAMPLES OF EMPLOYMENT SERVICES AND MEASURES TO TARGET PARTICULAR GROUPS OF JOB SEEKERS (continued)

Target Groups	Relevant Employment Services and Measures
Youth programs comprising specific programs for disadvantaged and unemployed youth	Training programs, wage subsidies and job search assistance; graduate practice for jobseekers up to 25 years of age, including reimbursement of the necessary personal expenses associated with the implementation of graduate practice; provision of employability and training plans, job and career counseling services, various aptitude tests, and vocational assessment tests; voluntary service with the aim of jobseekers to obtain practical experience on the job market, an allowance in a lump-sum amount of the subsistence minimum to cover necessary expenses for meals, accommodations, and travel expenses from place of residence or temporary residence to place of voluntary service
Measures for the disabled	Vocational rehabilitation, sheltered work programs or wage subsidies for individuals with physical, mental or social disabilities; an employment quota for the disabled, and in some countries, for other categories of workers. groups with limited work capacity, such as improving their job search skills, subsidies to private employment, sheltered employment, or adaptation of the workplace and post-employment counseling; reimbursement to the employers and employees of the costs of health insurance and social insurance premiums and contributions to retirement pensions
Older job seekers	Vocational rehabilitation, adaptation of working places, further training, retraining, and active employment services
Long-term unemployed	A combination of temporary employment (public works or subsidized employment), on-the-job training, and regular job-placement assistance

III. Benefit Dependency: Is There A Benefits Trap?



Is there evidence of widespread benefit dependency? Do those on benefits stay on them for long?

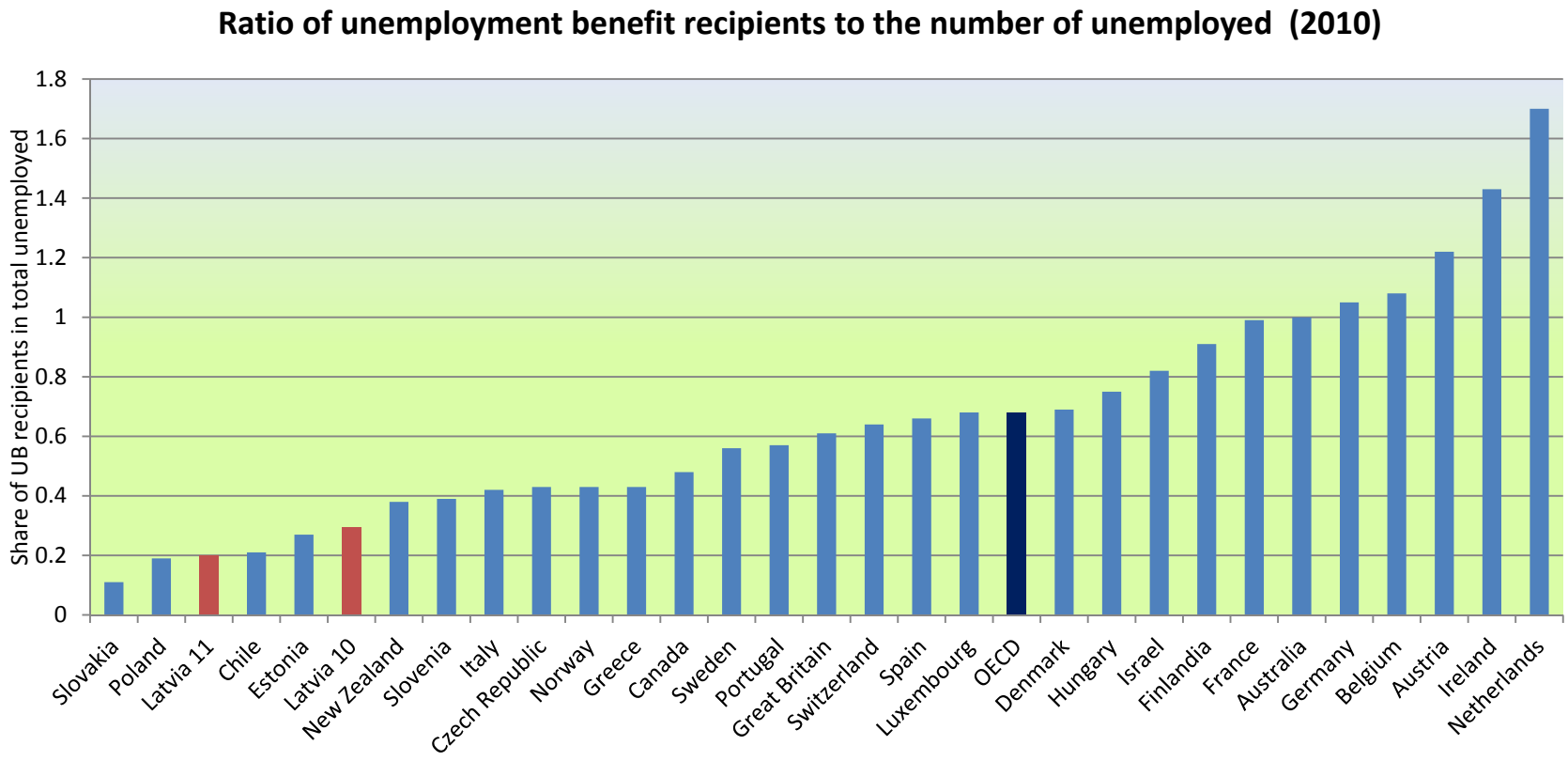
Background Papers/Presentations:

1. World Bank (2013). Latvia GMI Program: Main Design Characteristics and Comparison with Minimum Income Schemes in Other EU Member States (Boryana Gotcheva).
2. World Bank (2013). Expenditure and Performance of Welfare Benefits and Employment Programs in Latvia (Victoria Strokova and Tomas Damerau).

Evidence Does Not Support Widespread Benefit Dependency

- Coverage of both the unemployment insurance and the Guaranteed Minimum Income (GMI) program remains low
- After unemployment benefits run out, many of those that collect GMI beneficiaries do so as a temporary stop-gap
- There is scope for improving adequacy of benefit provision

Unemployment Benefit Still Covers Few

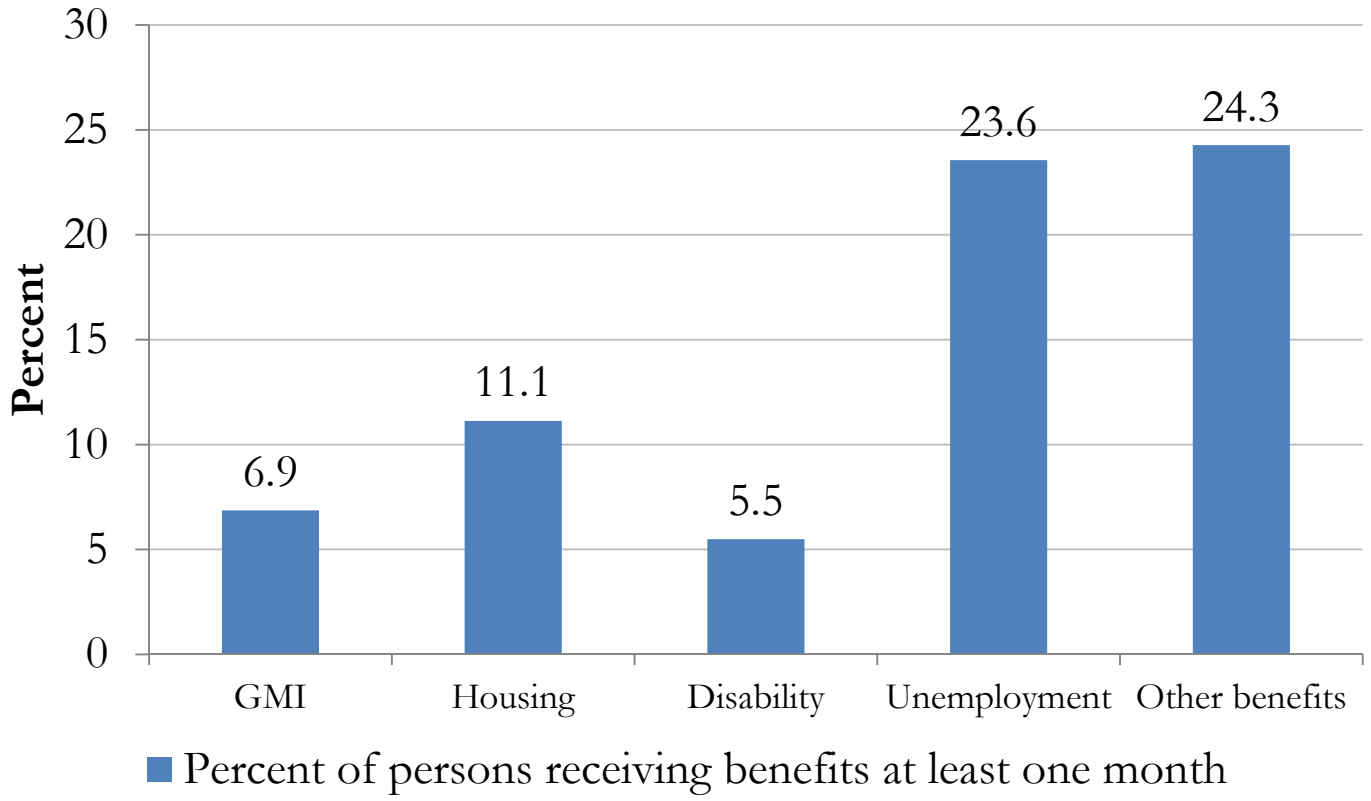


Sources: Eurostat for Latvia, OECD Employment and Labor Market Statistics for all other countries.

Relatively Few People GMI Have Benefited From GMI Compared to Unemployment Insurance

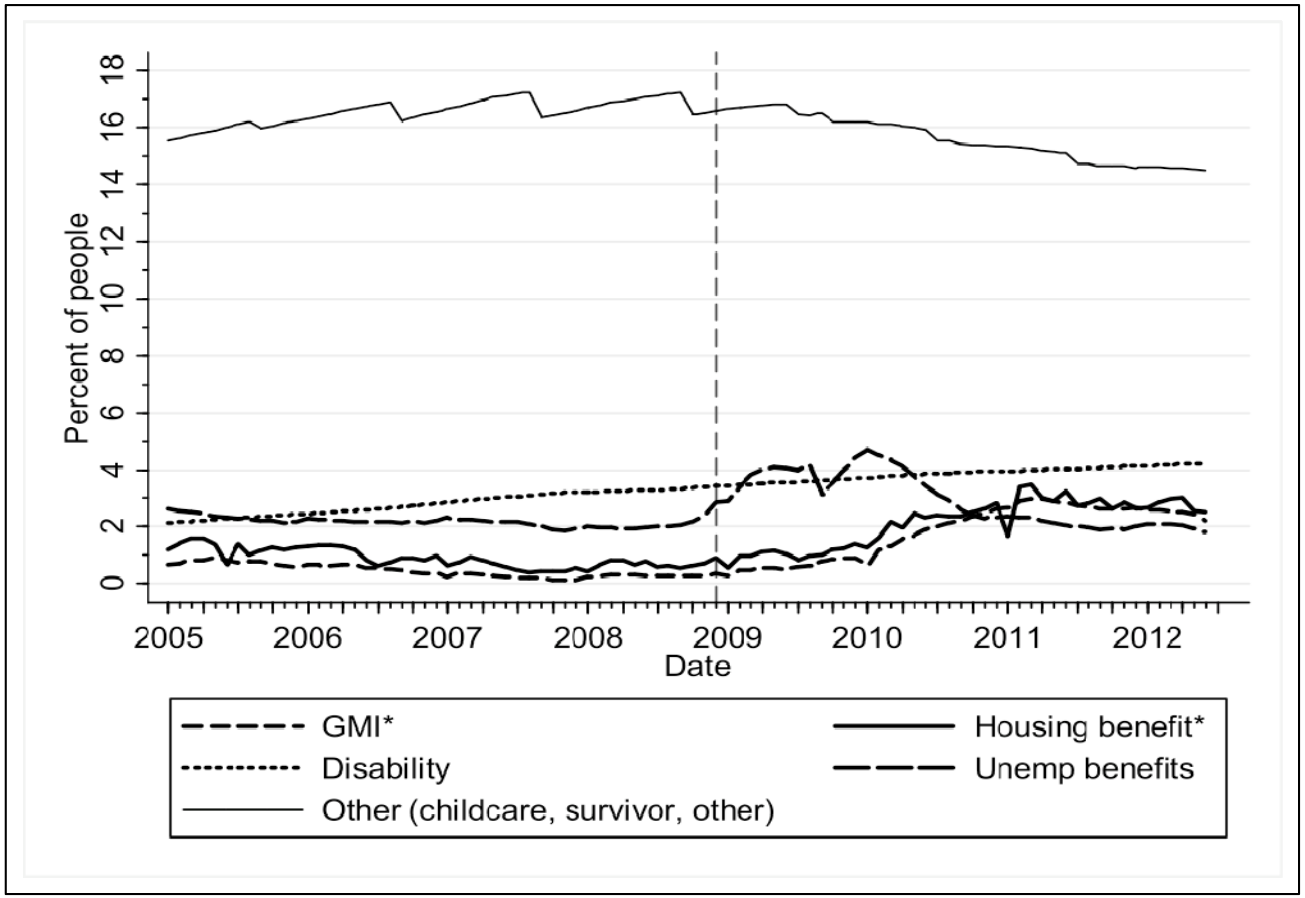
Share of People Receiving Different Benefits in Latvia for at Least One Month

(percent of population who received a benefit for at least one month in sample period)

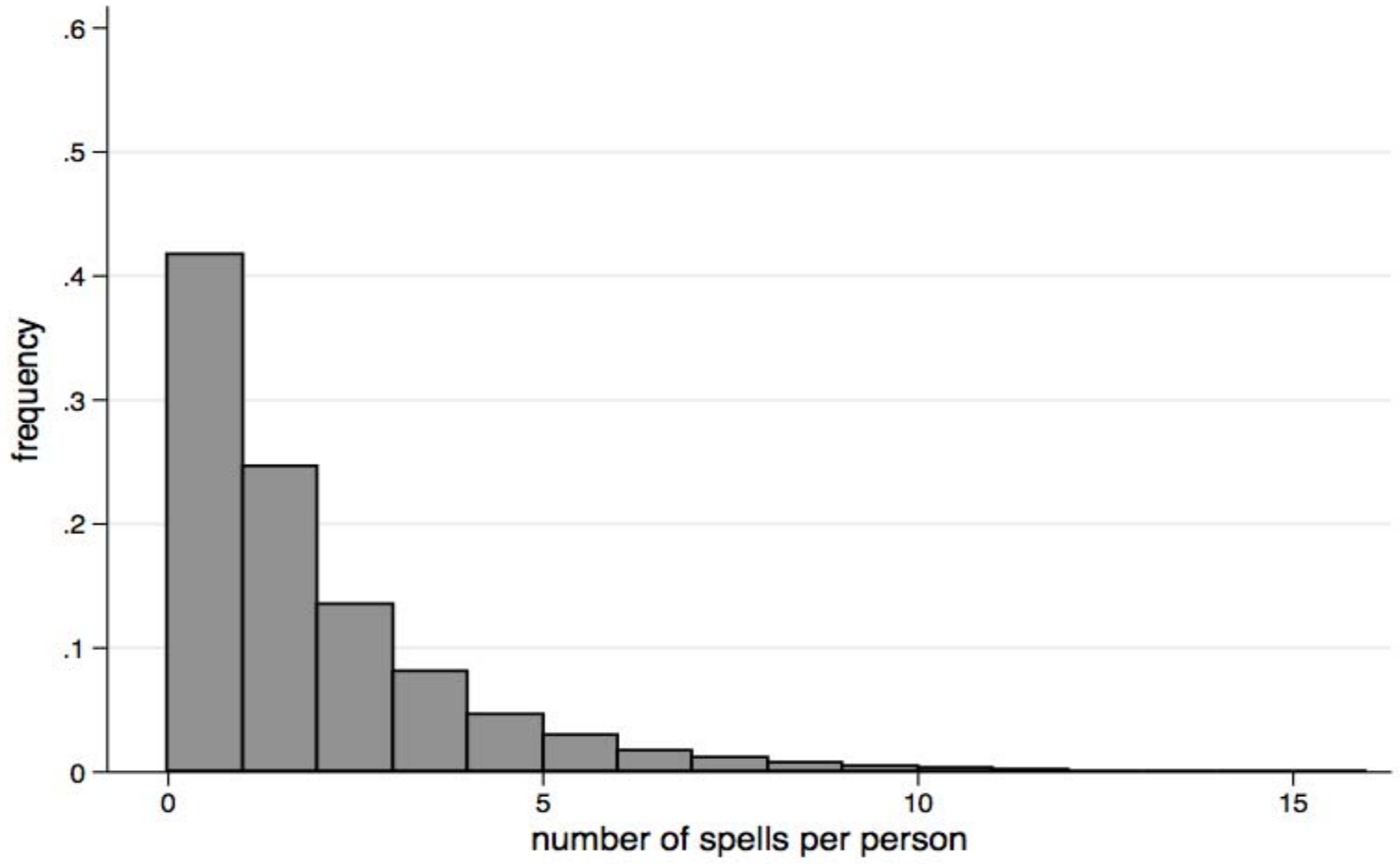


GMI has Grown Since 2010; But a Maximum of 4 Percent Have Participated at Any One Time …

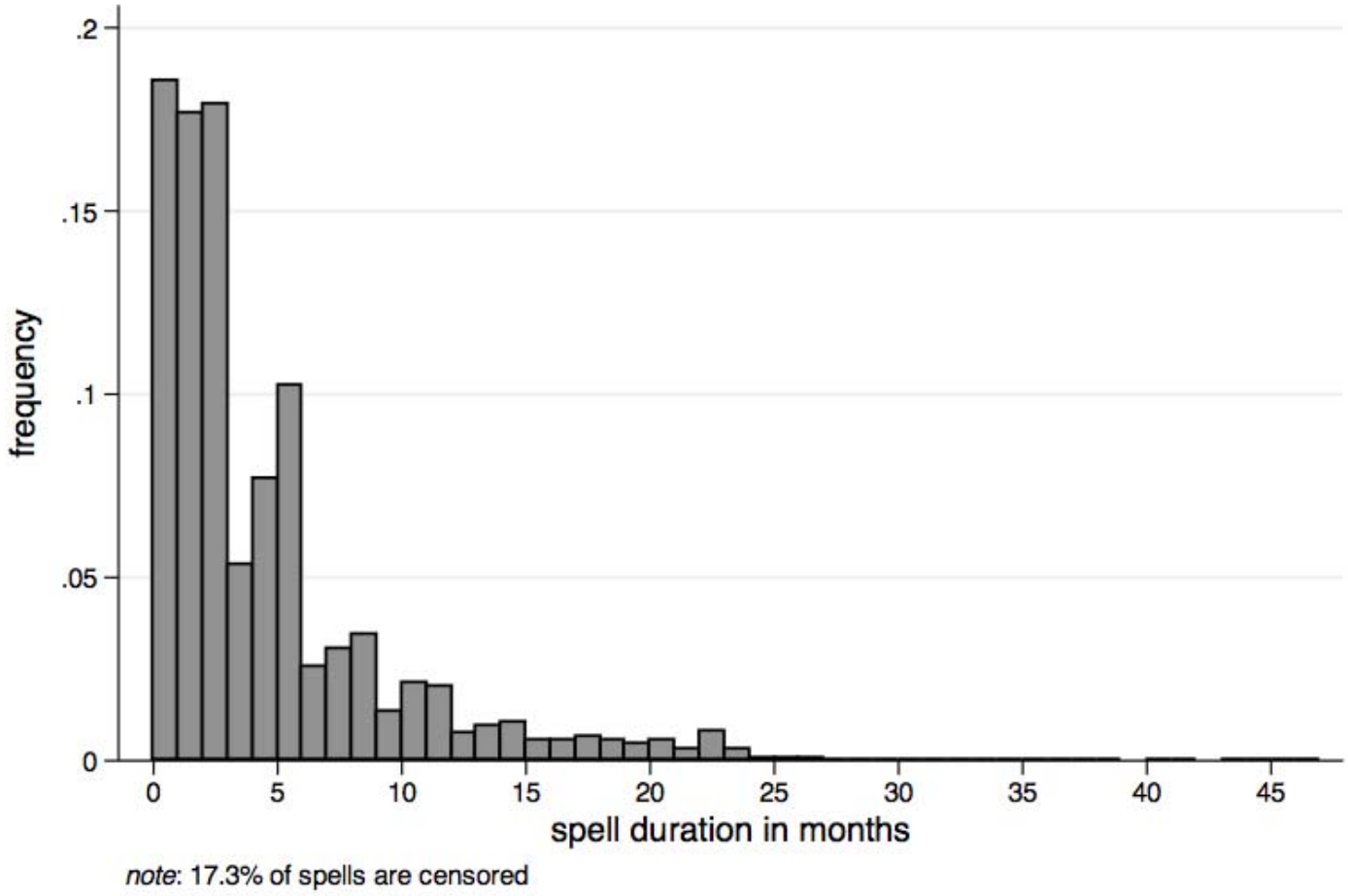
Benefit program incidence, 2005-2012



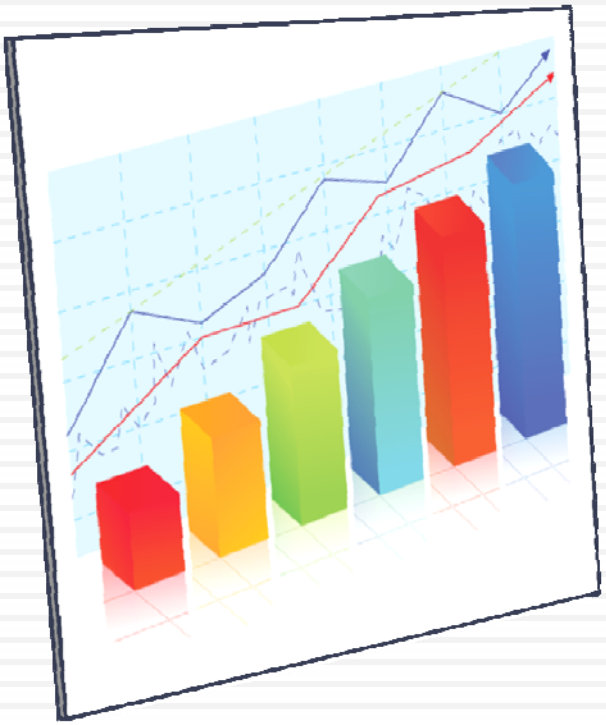
40% of People Have Only One GMI Spell In 2006-2012



… and Spell Durations Appear to be Short…with A Lot of Spells of One to Three Months



IV. Tax and Benefit Policy: Social Assistance Spending

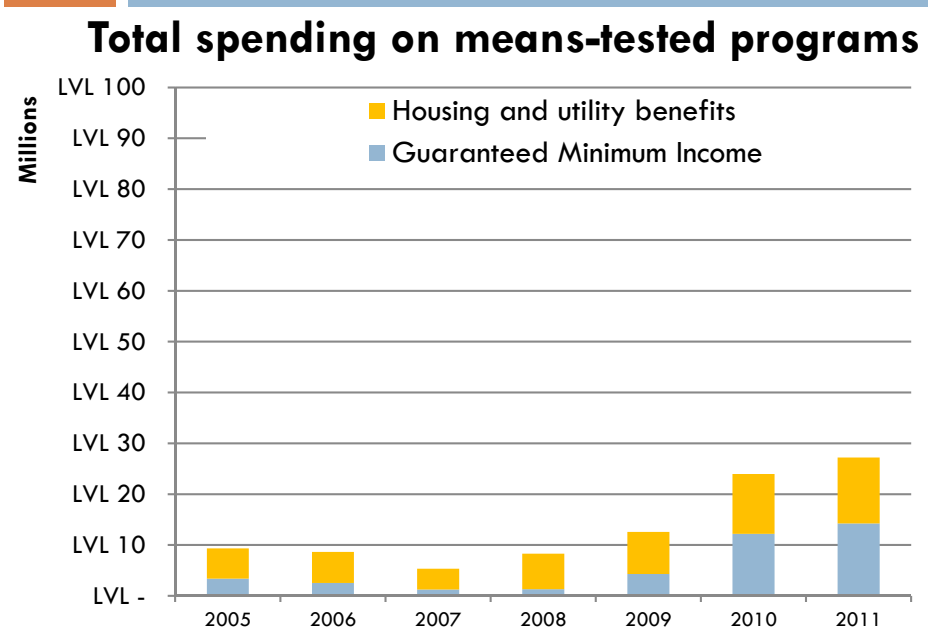


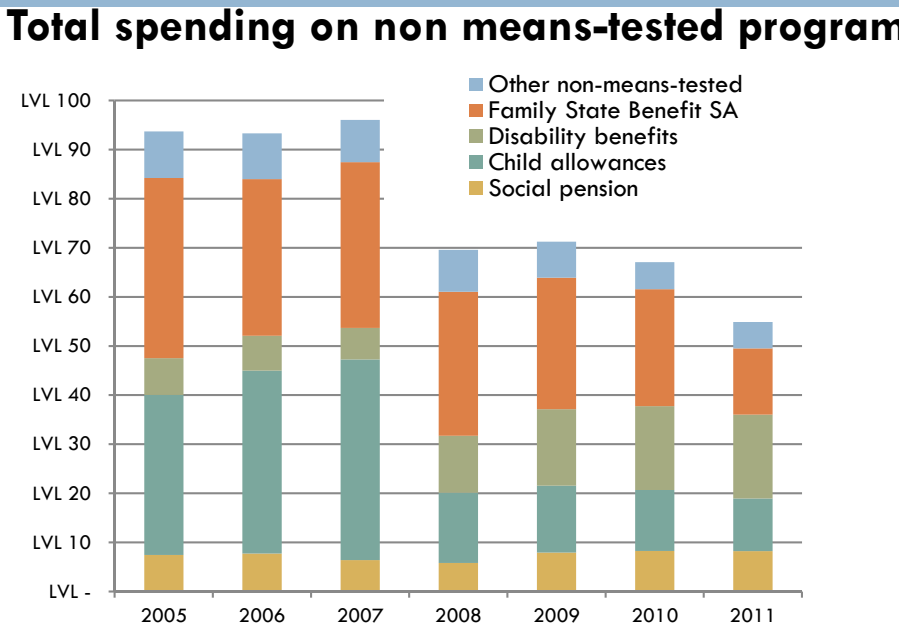
How much does Latvia spend on social assistance compared to other EU countries? How do programs perform?

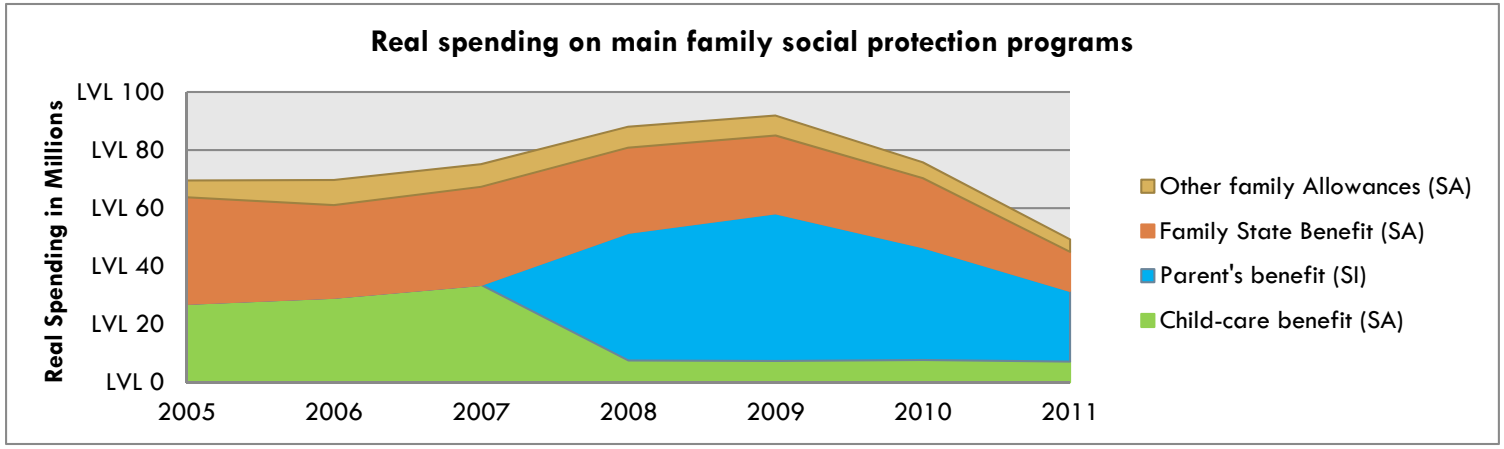
Background Paper:

1. World Bank (2013). Expenditure and Performance of Welfare Benefits and Employment Programs in Latvia (Victoria Strokova and Tomas Damerau).

Turning to Total Spending, Expenditure on Universal Programs is Larger Than On Means-Tested Programs

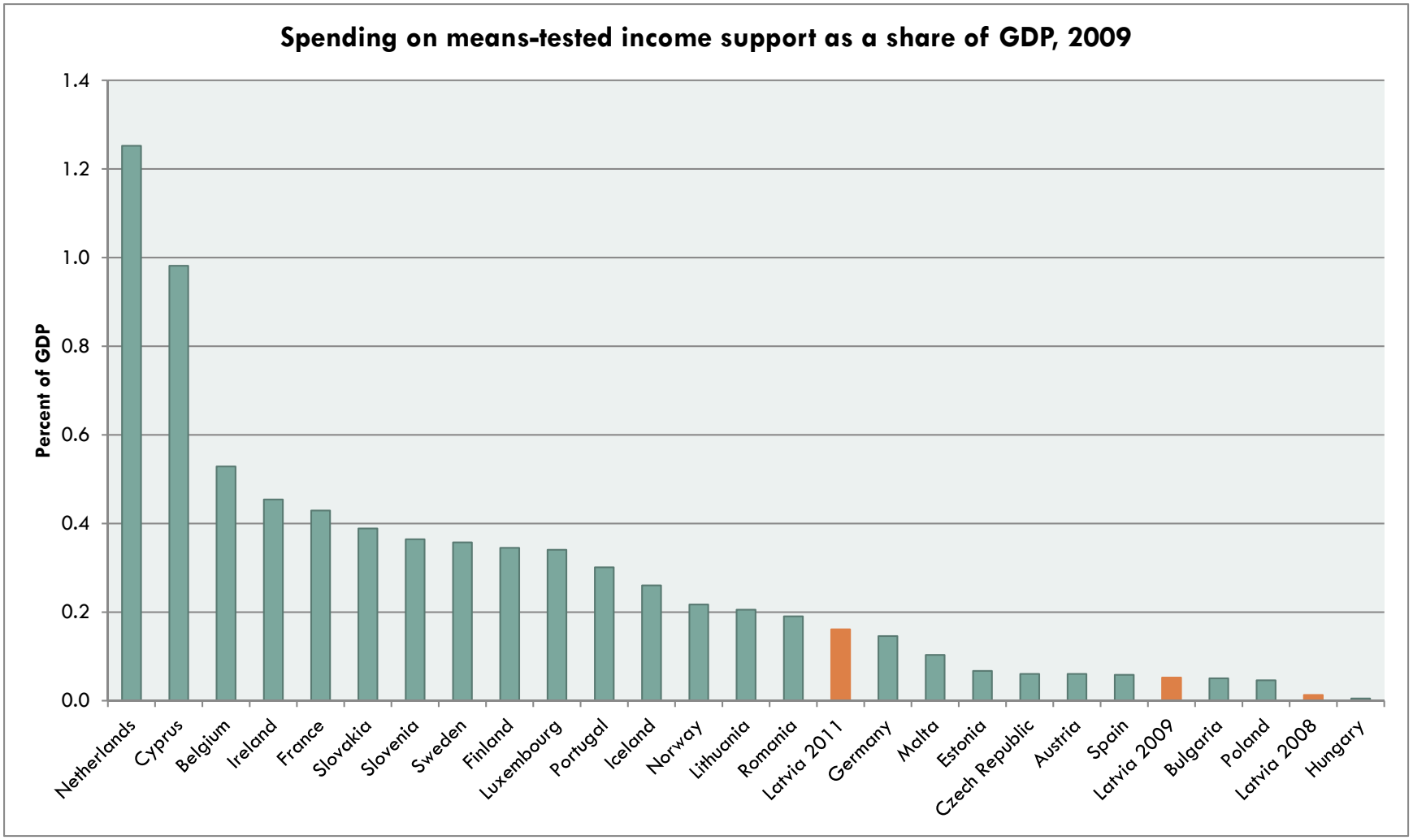






Source: Administrative data, Staff calculations.

Spending on Means-tested Income Support for the Poor Remains Quite Low in Latvia



Source: ESSPROS data, Administrative data from Ministry of Welfare, Staff calculations.

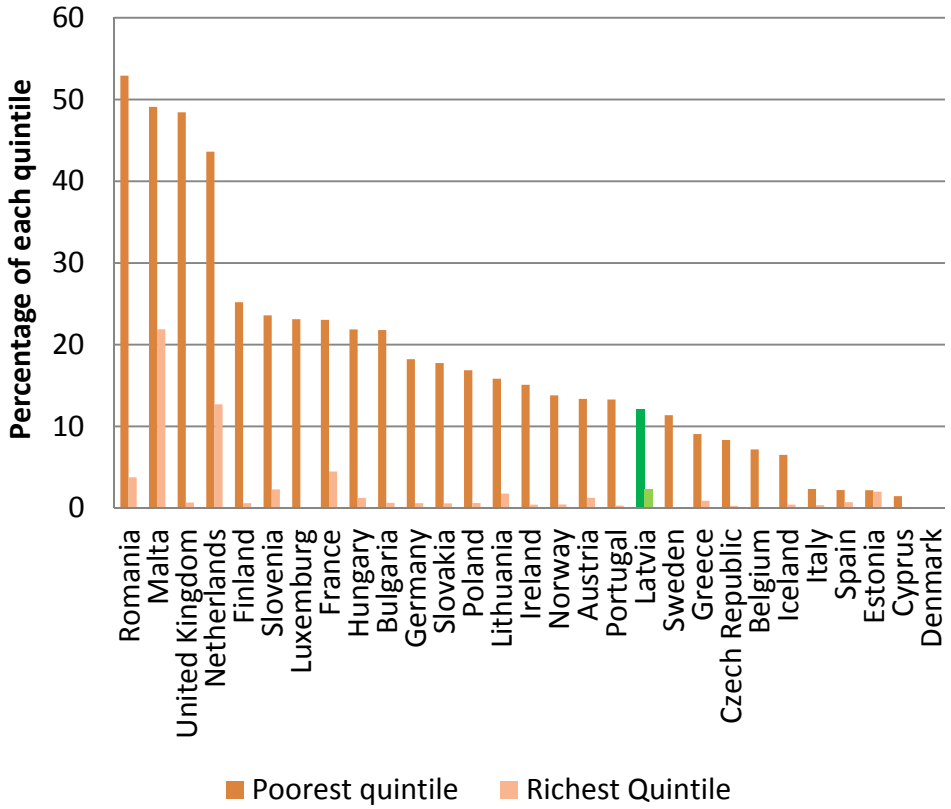
Indicators of Performance of Social Assistance

We use household survey data to assess performance of cash transfers:

- **Coverage**: percent of those in the *poorest quintile* who receive benefits
- **Targeting accuracy**: percent of benefits going to the *poorest quintile*
- **Generosity (Adequacy)**:
  - **Contribution to consumption:** Average transfer amount as a fraction of average income for beneficiary households in *poorest quintile*
  - **Unit transfers** as a fraction of minimum/average wage/poverty line

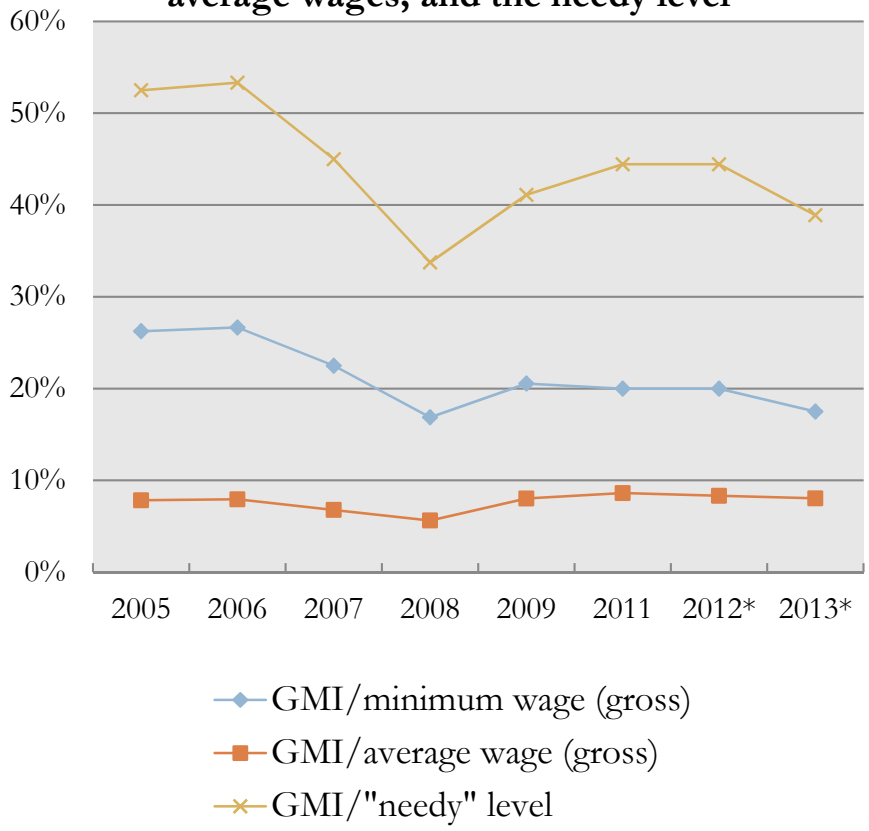
GMI is Well-Targeted (91% Goes to the Poorest Quintile), But Coverage and Adequacy Are Low

Coverage of the poorest and richest quintile by programs targeting social exclusion, 2009



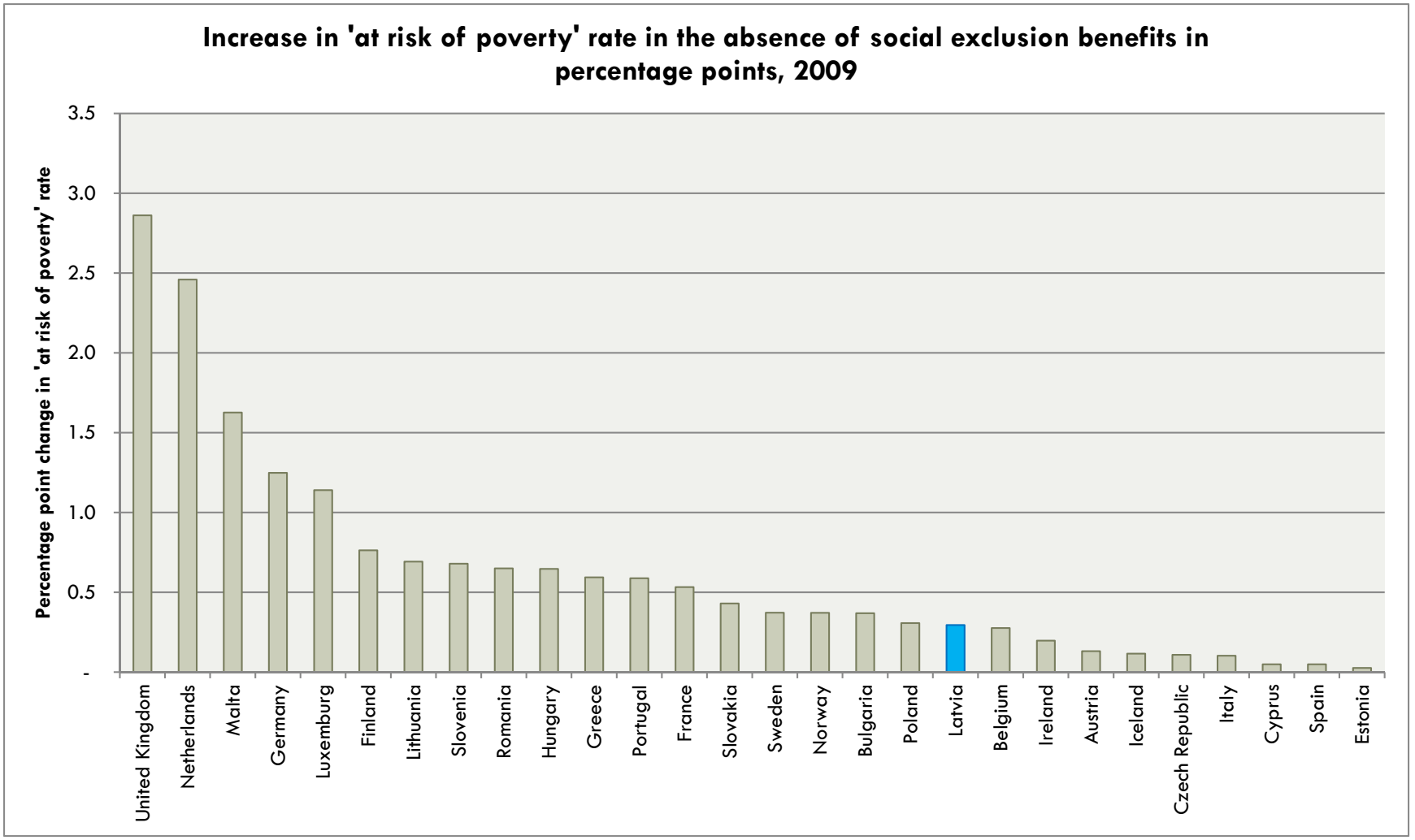
Source: EU-SILC 2010, World Bank staff calculations.

GMI benefit as a share of minimum and average wages, and the needy level



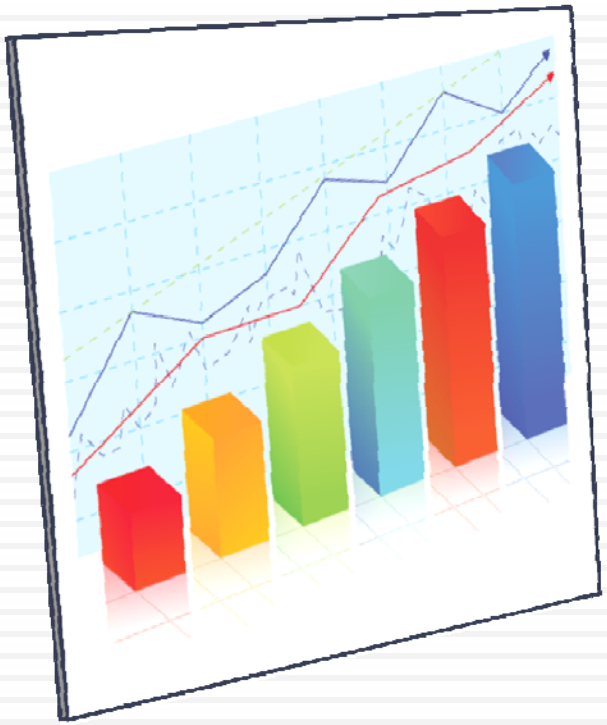
Source: Eurostat, Central Statistical Bureau of Latvia, Ministry of Welfare, World Bank staff calculations.

Poverty Impact is Low Due to Low Generosity and Coverage



Source: EU-SILC 2009, World Bank Staff calculations.

V. Tax and Benefit Policy: Protection and Work Incentives



Does the tax-benefit system provide sufficient protection from poverty? Is there evidence of work disincentives? Are there options to increase the pay-off of work for those of lowest income?

Background Paper:

1. World Bank (2013). Financial Incentives of the Tax and Benefit System in Latvia (Victoria Strokova and Tomas Damerau).

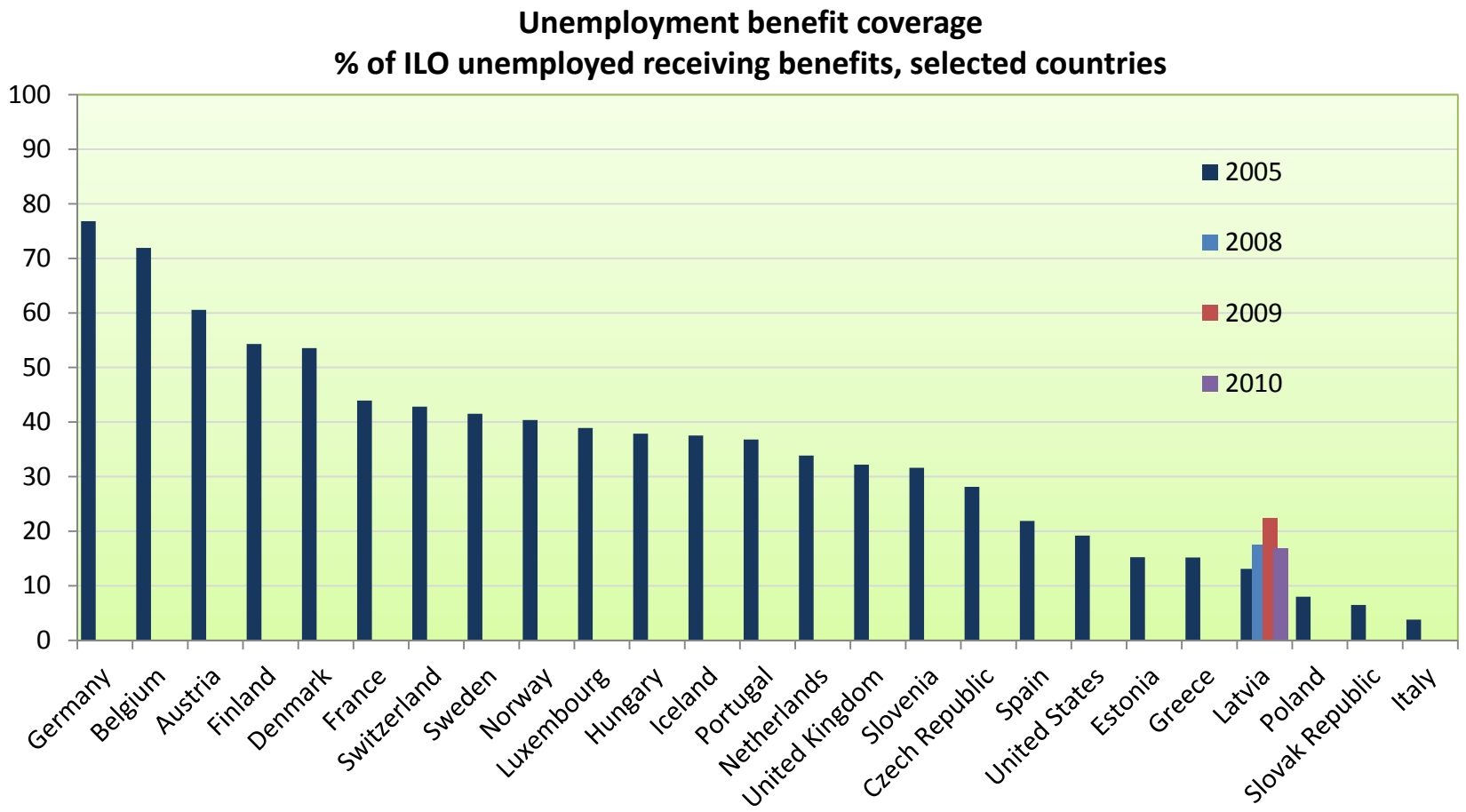
Does the Current Tax-Benefit System "Make Work Pay"?

- Work disincentives are unlikely to be the main employment barrier after a deep recession, however:
  - Those on means-tested benefit recipients face high marginal effective tax rates (for every LVL1 earned, a LVL1 of benefits is withdrawn)
  - Financial incentives to take up employment can be improved for low-wage earners

Does the Current Tax-Benefit System Provide Sufficient Protection Against Poverty?

- There is a scope for improving adequacy of benefit provision
  - Coverage of both the unemployment insurance and the GMI program remains low
  - Those on the GMI benefit are at a high risk of poverty
  - Recently passed reforms exacerbate income losses for the poorest

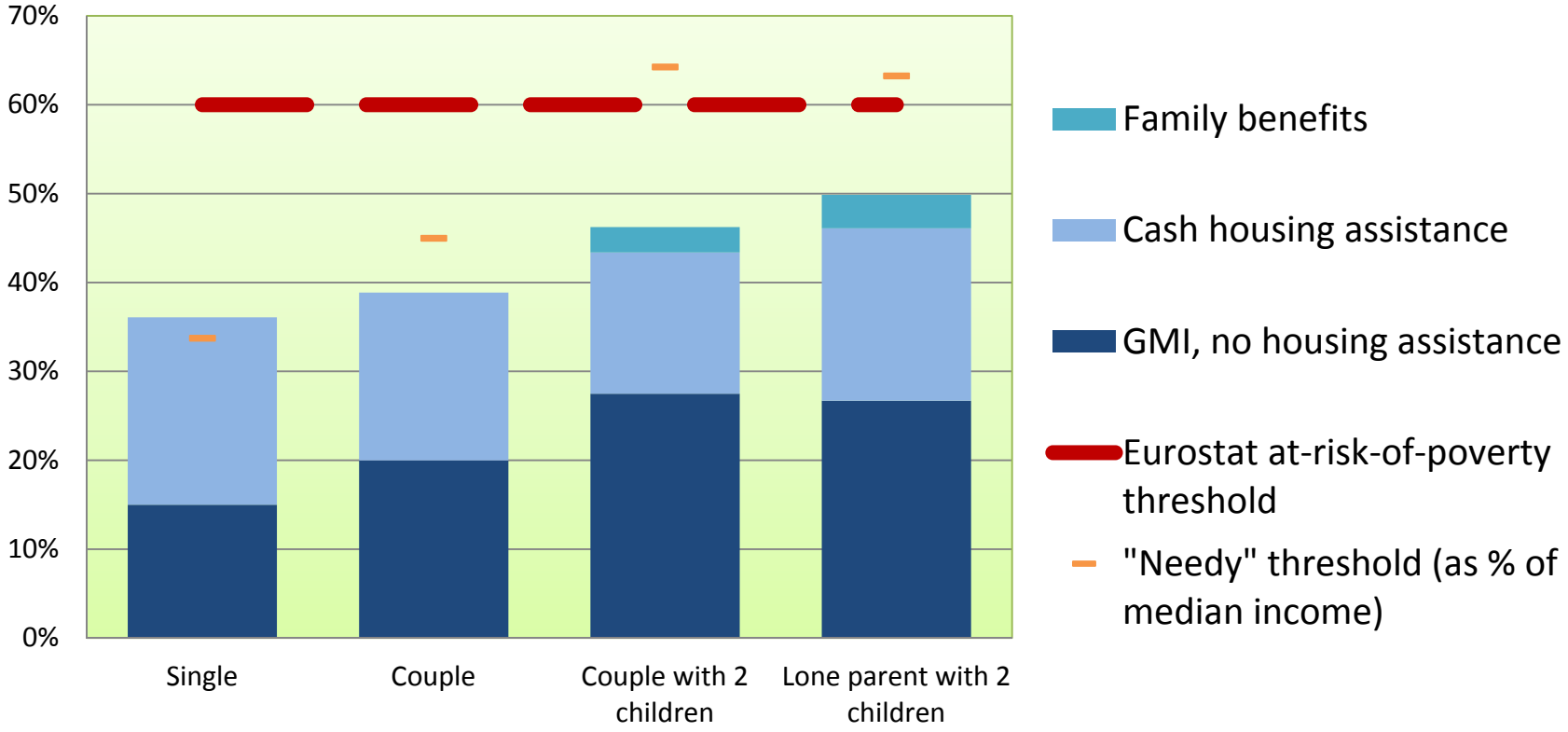
Unemployment Benefit Still Covers Few



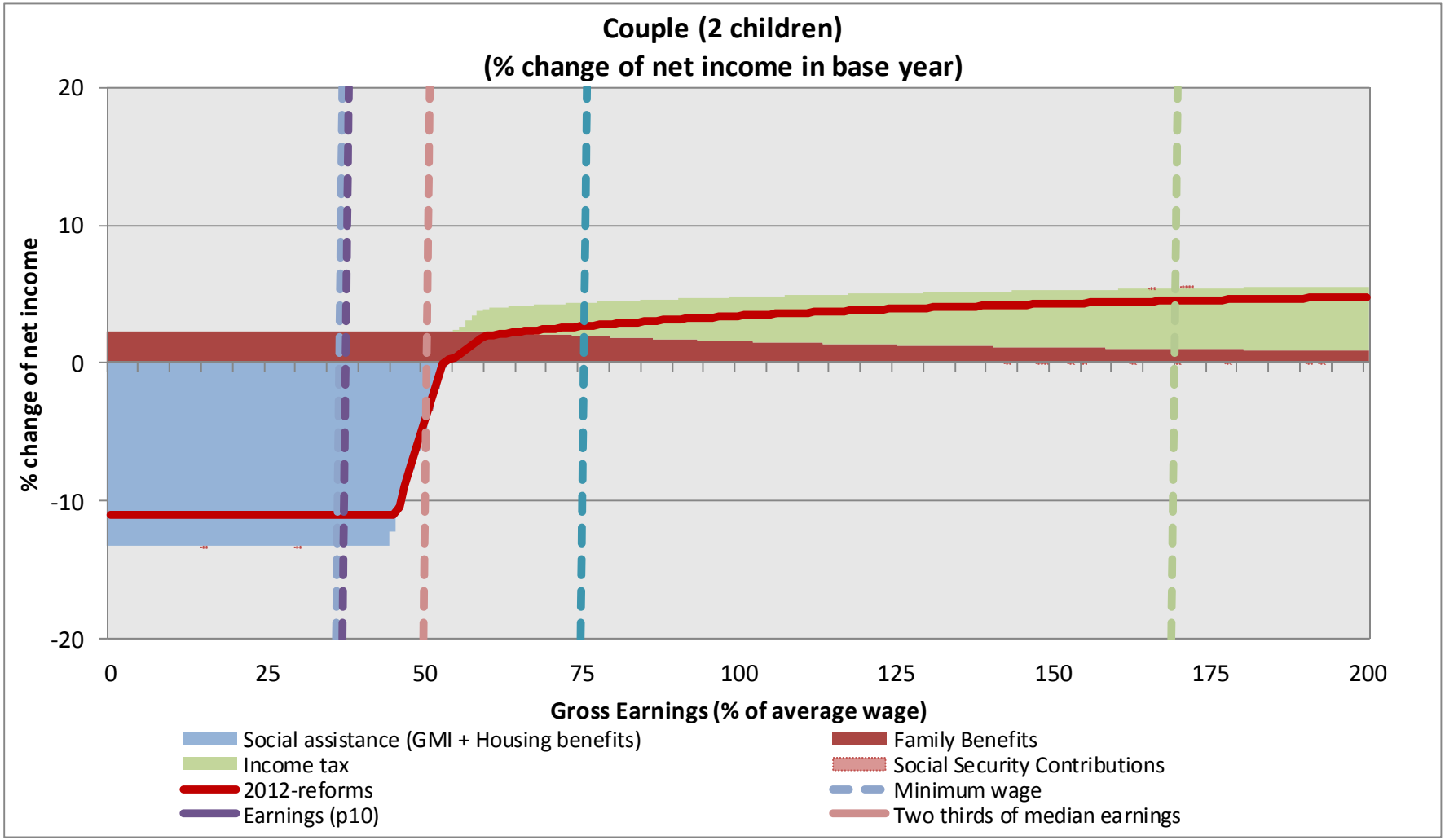
Sources: Authors' calculations using the Latvian Labor Force Survey; for other countries, Immervoll and Richardson (2011) using European Labor Force Surveys and Current Population Survey (US).

GMI Program Recipients with No Other Incomes are at a High Risk of Poverty

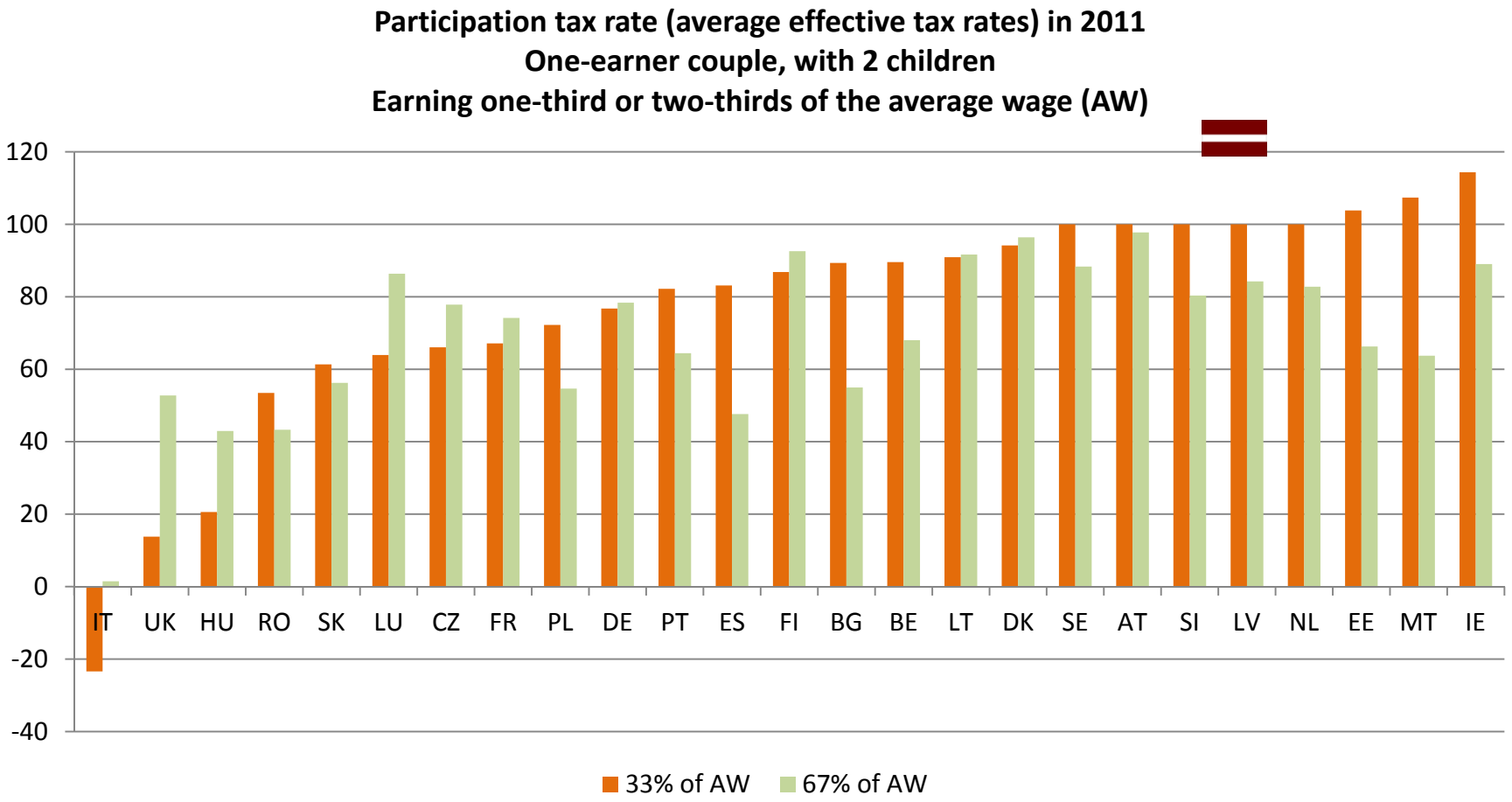
Maximum entitlements for different family type
Net income value in % of median household incomes, 2010



Recent Policy Changes Improved Situation of Many; But Reduced Incomes for Lowest Income Groups

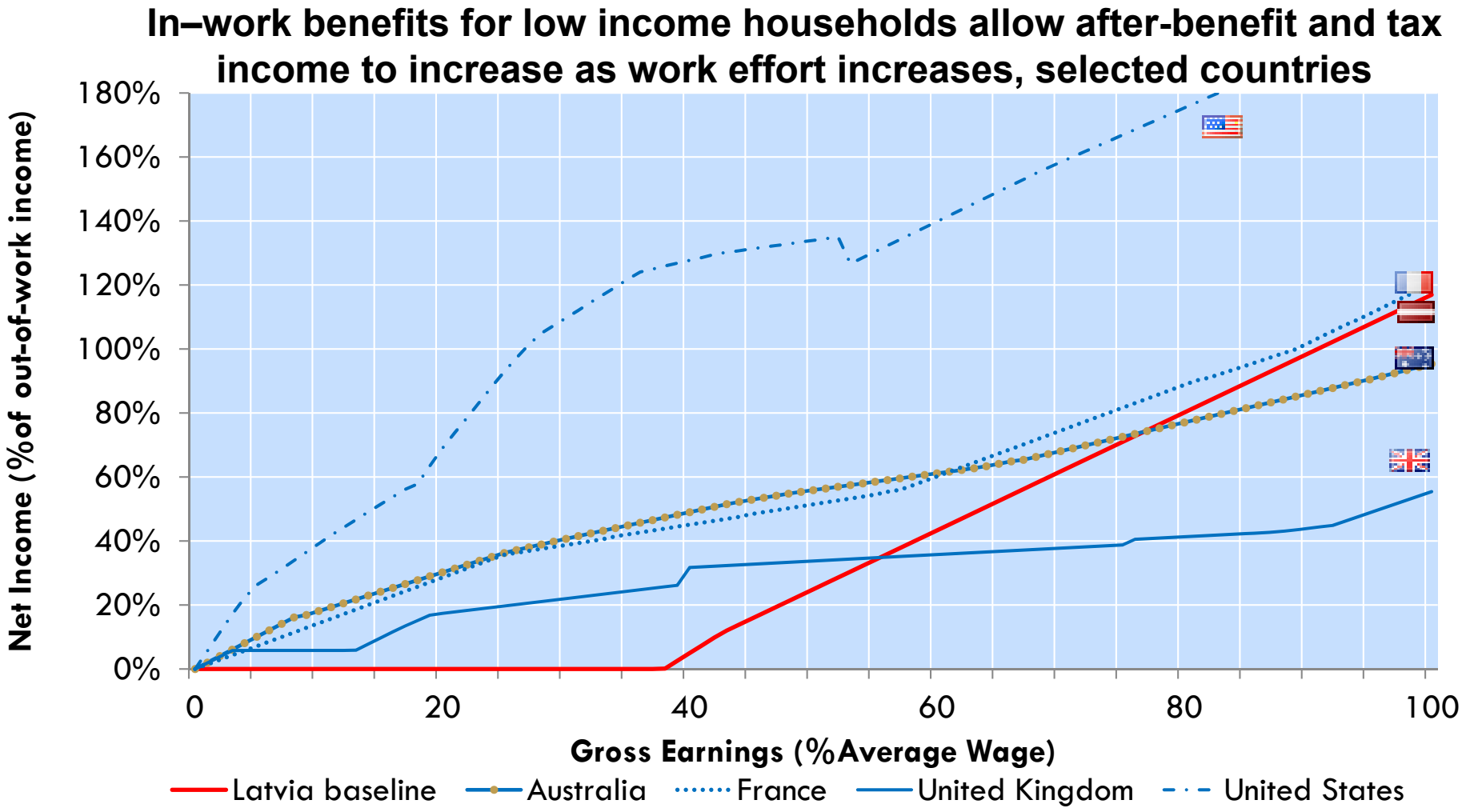


It Might Not Always Pay to Take a Low-Paid Job



Sources: World Bank calculations using OECD tax-benefit models

GMI Recipients Lose All Social Assistance On Moving to a Job in Latvia



Source: World Bank calculations using OECD, Tax-Benefit Models for Lone parent with two children.

OECD Policies To "Make Work Pay"

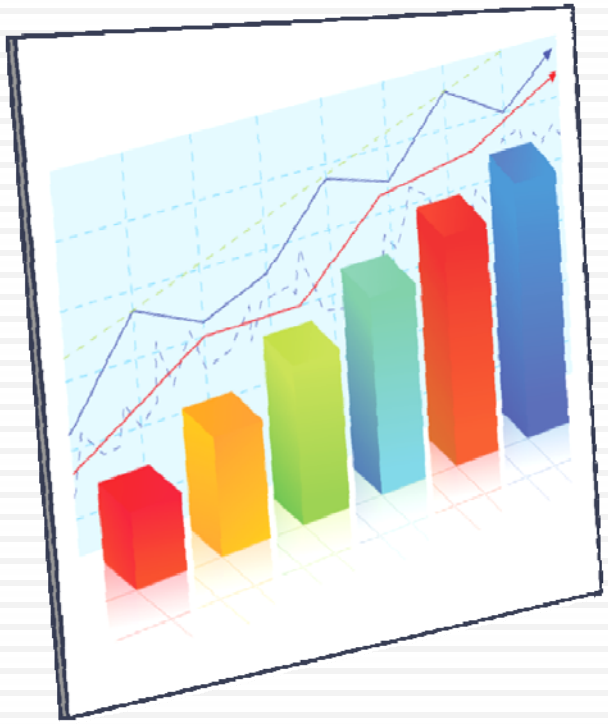
- Many countries operate **gradual benefit phase-outs** for individuals who manage to earn only limited amounts, e.g. Earned Income Tax Credits in Korea, United Kingdom, United States or tapered withdrawal of Social Assistance in France, Australia
- Increase of minimum wage and non-taxable minimum
- Employment-**conditional ("in-work") benefits** or **tax credits** that support the incomes of workers in non-marginal employment
  - Reduced social security contributions and/or taxes for low-wage employment
  - Temporary benefits ("back to work bonuses")
  - Permanent benefits (periodic payments via benefit or tax system)

Policy Options to Improve Protection and In-Work Benefits

- Benefit adequacy could be improved, while simultaneously pay off from work can be increased
  - Increase coverage and generosity of means-tested benefits
- Financial incentives to take up low-wage employment could be enhanced
  - e.g. “back to work” bonuses (for long-term unemployed/GMI beneficiaries, etc.)
  - A permanent in-work benefit scheme can be designed and implemented along with measures aimed at combatting under-reporting
- Tax benefit models allow to simultaneously assess theoretical effect of different measures above
  - Distributional analysis would be needed to assess full impact and costs of any reforms
  - Informality and under-reporting could present a challenge in designing targeted make-work-pay policies

VI.

GMI Benefit Design



Main design characteristics and comparison with minimum income schemes in other EU member states

Background Paper:

1. World Bank (2013). Latvia GMI Program: Main Design Characteristics and Comparison with Minimum Income Schemes in Other EU Member States (Boryana Gotcheva).

Latvia Minimum Income Scheme Compared to Other EU Countries

- Centrally designed–as in most EU countries–with similar objectives (protection/activation)
- As in many countries, implementation delegated to municipalities
- But big difference is that financing is also delegated to municipalities (except for co-financing 2009 (October) until end-2012)
- Latvia GMI framework gives more discretion to municipalities in the field of benefit design than in many EU
  - State sets only a 'minimum standard' for GMI eligibility and adequacy
  - Municipal authorities have discretion to decide to grant higher GMI benefit levels (but with ceiling)
  - GMI provision likely to be a function of financing capacity and not just social assistance needs

Advantages and Disadvantages to Decentralizing Social Assistance Financing; But full Decentralization of Financing Rare in EU

Centralized Financing	Mixed Financing	Decentralized Financing
Bulgaria, Cyprus, Czech Republic, Estonia, France, Ireland, Lithuania (piloted local financing), Poland, Portugal, Romania (administrative cost covered by local budgets), Slovakia, Slovenia, U.K.	Belgium, Denmark, Hungary (5-20% from local governments), Germany (assistance for those who cannot work provided by municipalities), Italy, Netherlands (municipalities can provide other allowances), Spain	Austria, Finland, Latvia, Sweden

	Centralized Financing	Decentralized Financing
Strengths	• State can ensure equal financing standards (same eligibility criteria, amounts of benefits and implementation rules) irrespective of the financial status of the municipality • State financing flows based on legally binding 'state responsibility' makes them more stable and predictable • State has higher capacity for risk pooling • State has better access to a wider range of financing sources (budget reallocations, tax increases, foreign grants and/or borrowing) • State is better positioned to provide counter-cyclical financing for the safety nets, and for last resort social assistance (LRSA) in particular • State is better able to protect spending on LRSA in economic downturns (reallocate funds from other budget categories)	• Better accounting of local needs / local government level discretion • More flexibility in prioritizing benefits with change in needs and nature of vulnerability • Provides a link between beneficiaries and taxpayers

Design Options to Consider for GMI (coming from a comparison with other EU countries)

- GMI provides same benefit for children and adults (no explicit or implicit equivalence scales)
  - Apply implicit or explicit equivalence scales to account for the shared use of resources within a household; Anchor GMI level to an objective welfare standard such as minimum subsistence level
- GMI income test has allowed less disregards over time and includes a larger number of state benefits, particularly the child care benefit, the child care benefit supplement and the full parental benefit
- Many EU countries allow overlap of last-resort social transfers and child benefits in an effort to strengthen the support for families with children (as they tend to have a higher risk of poverty)
- Gaps in legal definition of the GMI asset test and the large scope for municipal discretion in proving social assistance could have significant impact on access to GMI

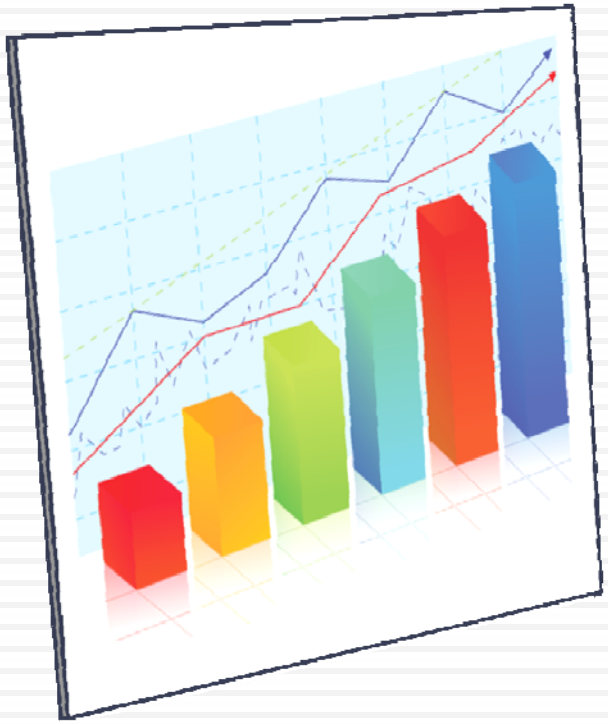
Design Options to Consider for GMI (Coming From A Comparison With Other EU Countries)

- 'Make work pay': Introduce gradual withdrawal of benefits after GMI beneficiaries start working to cushion the abrupt loss of income from benefits
- e.g. beneficiaries could continue receive the full benefit or a fraction of it for six or more months after taking a job
- Similar effects achieved when threshold for exit from the GMI is set at a higher nominal level compared to entry

Devolved Financing and Implementation Presents a Challenge For Coordination and Monitoring

- **Overall recommendation to ensure an integrated system with common objectives is good coordination of design and implementation, along with common mechanisms and information systems for program tracking and evaluation**
- Develop information system for Ministry of Welfare to track the performance of GMI with administrative, qualitative and household budget data
- Bring dividends in terms of understanding how to adjust the design of GMI in order to improve targeting accuracy, coverage of the poor and welfare impact
- Also, as a system of control and monitoring (including audit)
- Will necessitate information tools, oversight staff and other resources

VII. ALMP Programs



How are ALMP programs performing and what lessons can be drawn for future policy directions?

Presentation:

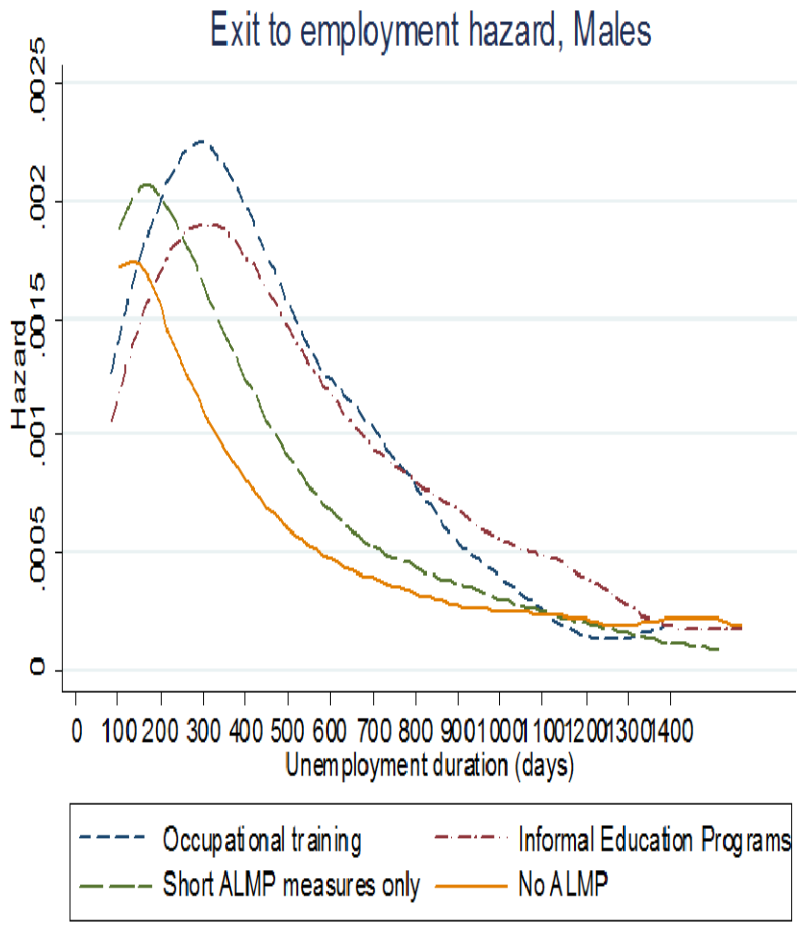
1. World Bank (2013). Evaluation of active labor market programs in Latvia (Mihails Hazans and Jekaterina Dmitrijeva)

Questions on Active Labor Market Programs (ALMPs)

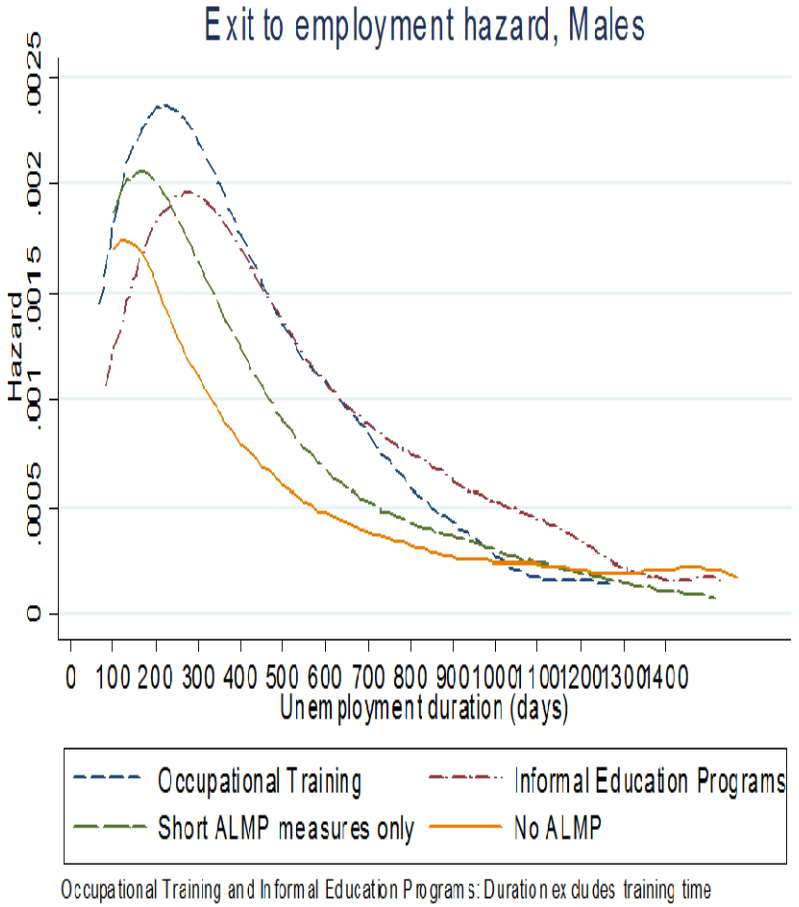
- Which ALMP programs (if any) helped to improve subsequent labor market outcomes of the *treated* (*trained*) in comparison to otherwise similar untreated unemployed?
- How do different types of programs (occupational training, employer provided training and informal education programs) differ from each other in terms of their performance?
- Does employer provided training perform considerably better than the traditional (out-of-the-job) occupational training? Is there a case for a substantial expansion of subsidized employer provided training in Latvia?
- How do different programs within each type (e.g. training in different occupations, or informal education in different languages or at different levels) differ from each other in terms of their performance?

Exit to employment hazard, Males

by unemployment duration



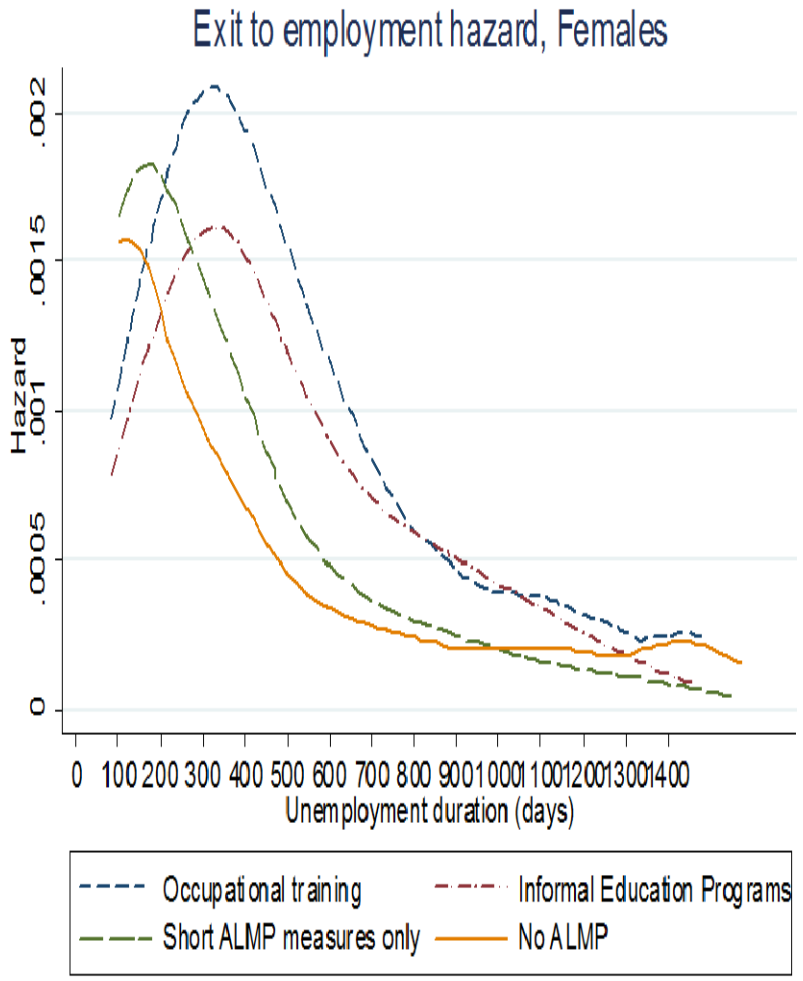
by unemployment duration, excluding training time



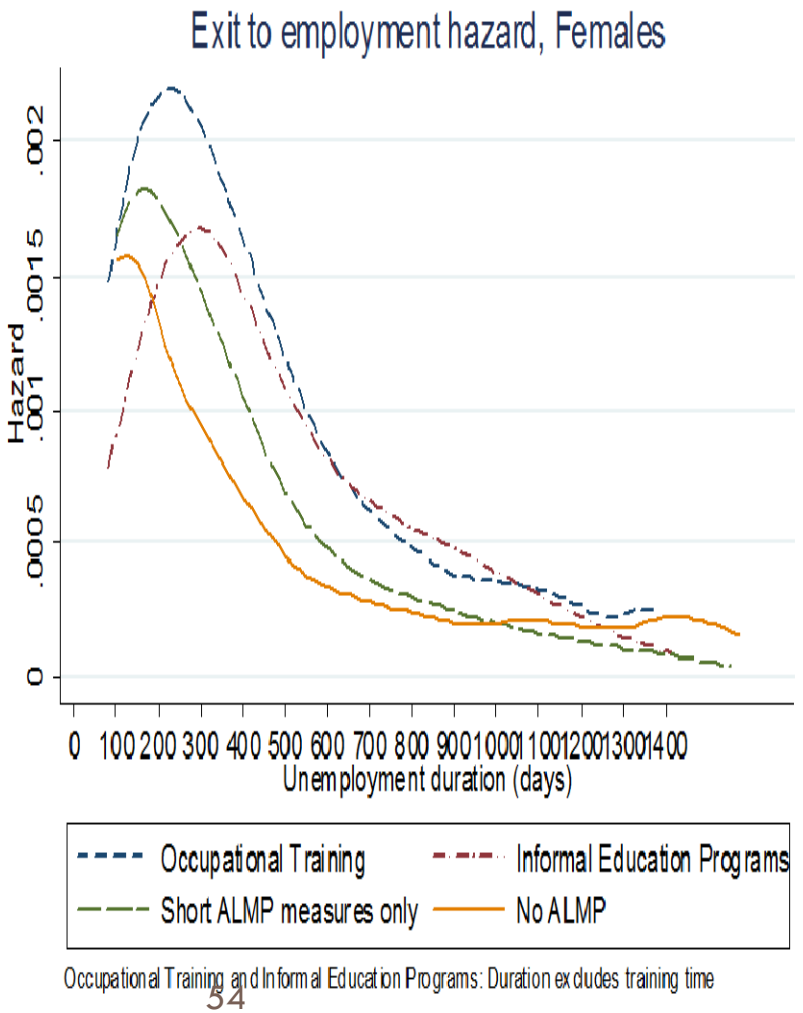
Occupational Training and Informal Education Programs: Duration excludes training time

Exit to employment hazard, Females

by unemployment duration



by unemployment duration, excluding training time



Occupational Training and Informal Education Programs: Duration excludes training time

Programs Covered

- Occupational training for unemployed and (since 2011) training for unemployed with coupon method (OT)
  - vocational training, requalification and qualification improvement
- Employer provided training leading to professional qualification (EPT)
- Informal education programs (IEP),
  - state and foreign language courses,
  - IT and software training,
  - training in business and record keeping,
  - services,
  - car, bus, tractor and other vehicle driving

Data

Individual data from two administrative data sources :

- SEA register data - information related to registered unemployment episodes and participation
- SSIA monthly records – for constructing full employment history between 2005 and 2012 for all individuals

Aggregate data from official statistics

- Conversion of nominal wages gained in 2005-2011 to real 2012 Lats

Sample

We consider :

- Flow sample of 508 437 individuals entering registered unemployment between 01/01/2008 and 31/12/2011
- First unemployment spell occurring in this period and subsequent employment outcomes;
- robustness check - all unemployment spells

Excluded :

- Individuals with other important treatments (subsidized jobs). Short ALMP such as MIC (measures to improve competitiveness) allowed
- Individuals with multiple treatments (several training programs completed during the considered unemployment spells
- Non-participants with training in future unemployment spells (a very small group anyway)

Sample

Final sample - 78% of initial sample (399 928 individuals):

- 9% (35 458 individuals) *treated* (= trained) unemployed – participants in a single training program.
- 34% (134 481 individuals) *untreated* unemployed, who have not undergone any ALMP - "No ALMP" group.
- 58% (229 989 individuals) *untreated* unemployed, only involved in short term ALMP (MIC) "Short ALMP only" group.
- Robustness check – 517 484 spells; 9.6% *treated*; 35.1% *untreated* "No ALMP" ; 55.3% *untreated* "Short ALMP only"

Analysis outline

I - Timing of participation (how programs are implemented)

II - Selection into training (who chooses and/or is chosen)

For each of 3 main training types (OT, IEP, EPT) :

- Composition of participant groups (distribution of main characteristics)
- Estimation of a selection equation : Binary outcome (*Probit*) model is fit to estimate the probability to undergo a training program T conditional on a set of individual and socio-demographic characteristics (sex, age, region, education, work experience, language skills, etc.)

Analysis outline (2)

III – Evaluation (who benefit from training) using adequate econometric approaches :

- Duration models – modeling duration until job is found
- Statistical matching approach comparing main employment outcomes of treatment and control groups based on estimated treatment probability (propensity score). We use both nonparametric estimator (ex. *kernel*) if the form of relationship between treatment and outcome is left flexible or parametric (ex: OLS) if the assumed form is linear.
- For outcomes that involve selection (wages only observed for those who found jobs) – Tobit model (total time worked or total earnings over a time period)

Outcomes (1)

Two alternative measures of time elapsed:

- R- Time elapsed since registration (post-registration outcomes) for both treatment (T) and control (C) groups
- T- Time elapsed since the end of training (post-training outcomes) for T group

Three alternative measures of unemployment duration :

- D1: Duration from registration till job is found (or end of observation period)
- D2=D1, excluding duration of training (if any)
- D3 =D1 for non-treated, while D3 = Duration from the end of training till job is found (or end of observation)

Outcomes (2)

Four principal outcomes :

- Y1: Employment by time horizon: employed in month X (since registration or since end of training)
- Y2: Transition to employment (3 or more months) at different time horizons.
- Y3: Number of months worked within time horizon
- Y4: Average monthly earnings, by time horizon (gross earnings within X months since start/number of months worked Y3)

*Values of X – time horizon : 6-9-12-15-18-21-24 months

Outcomes (3)

Three secondary outcomes :

- Y5 : Earnings at exit to job (1st or 2nd month of employment)
- Y6 : Number of subsequent unemployment spells (job stability)
- Y7 : Number of subsequent employment spells (job stability)

Results of ALMP Evaluation

- **All types of professional training and informal education programs for unemployed significantly improve participants' employment rates—both soon after training completion and in the medium term**
- **A substantial variation in terms of various labor market outcomes is found both between types of programs and within each type**
- **Overall, the best performing programs for *men* include:**
  - *professional training in manual, as well as service and a sales jobs*
  - *employer provided training in non-manual jobs*
  - *informal education programs in project management and software*
  - *informal education programs for professional drivers of transport and industrial vehicles*
- **For *women*, the best performing programs include:**
  - *employer provided training in manual jobs*
  - *professional training in manual jobs*
  - *IT (basic skills)*
  - *state language (categories 2 & 3) and English (intermediate level)*
  - *professional training in manual, as well as service and a sales jobs*

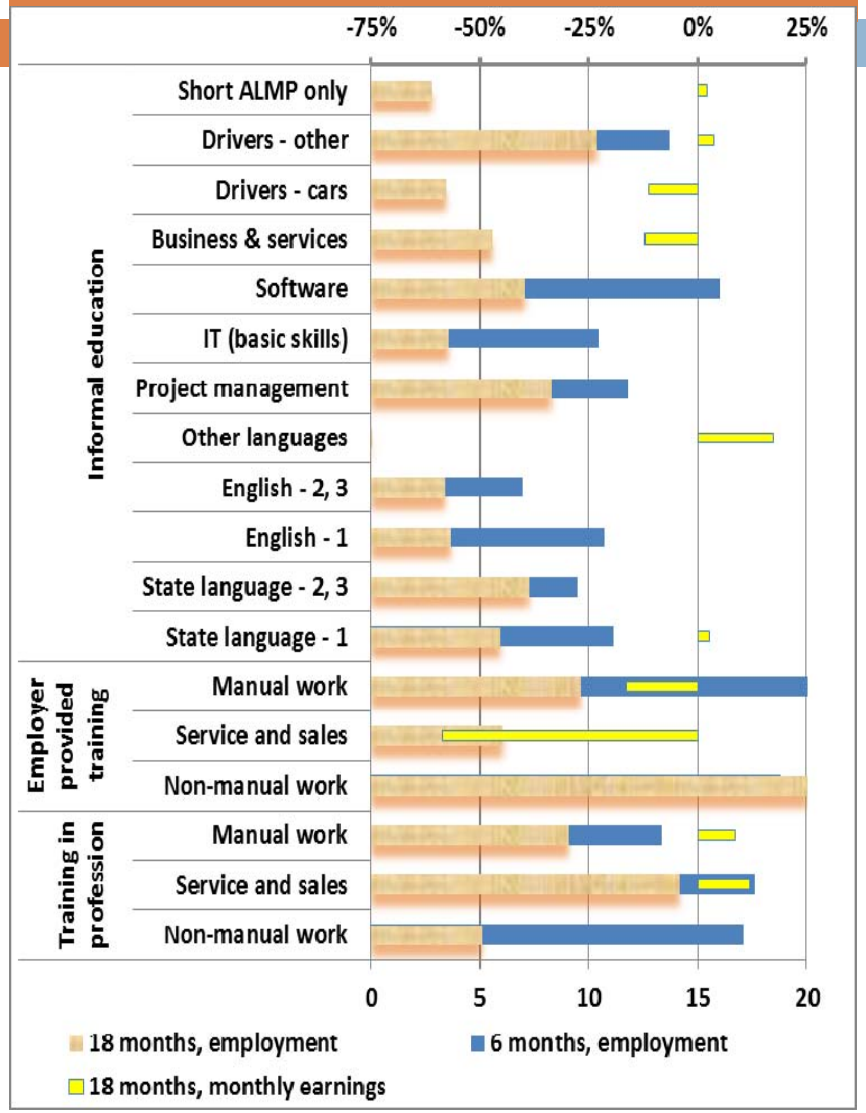
Results of ALMP Evaluation (2)

- For **most of the employer-provided training programs** (service and sales sector for both genders; manual jobs for men, and non-manual jobs for women), **the participants who keep their jobs have much lower wages than otherwise similar participants of other programs or non-participants**; for females, these programs also do not show a long-term effect on employment
- There is no case for expanding subsidized employer provided training
- While short (non-training) measures to improve competitiveness of the unemployed are useful, they cannot substitute training and education, especially in the medium and longer term
- Evaluation of new ALMP programs using micro-level data should become a normal practice

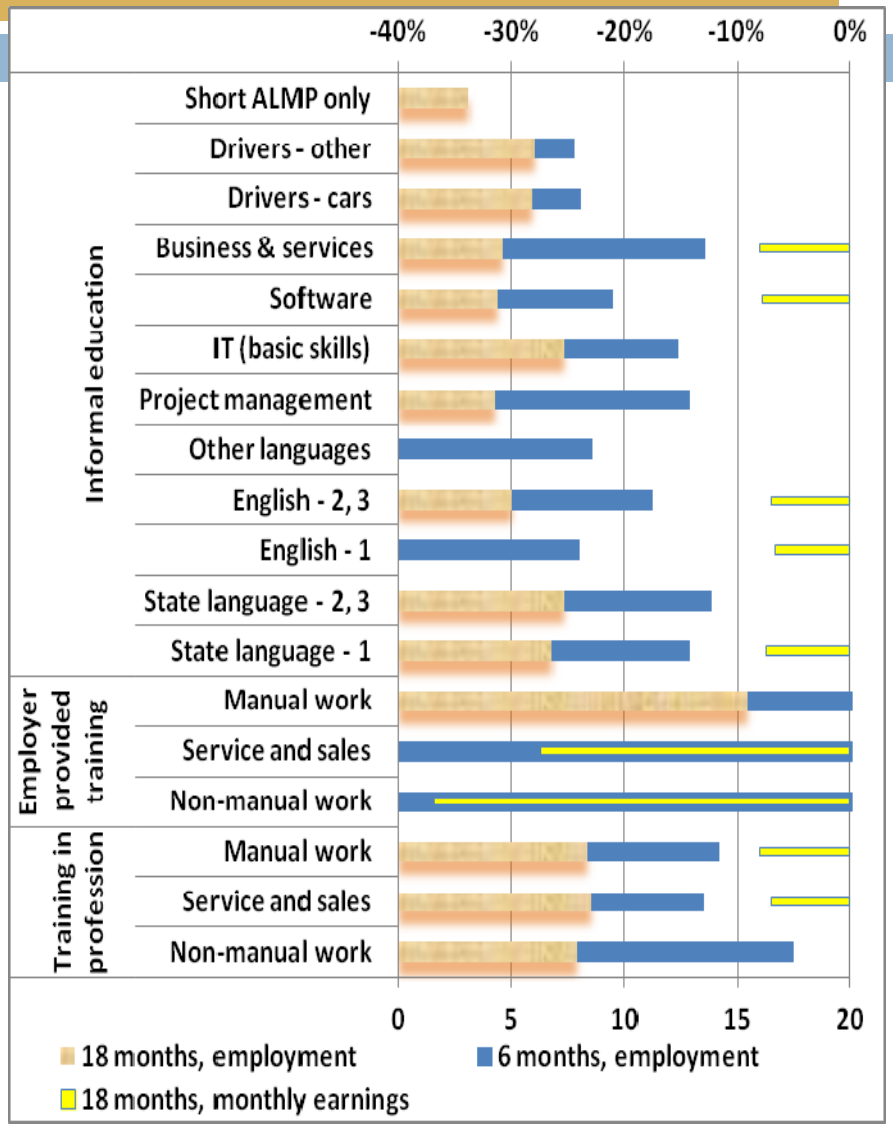
Estimated ALMP effects on:

- **employment rates** 6 and 18 months after training (% points, **lower scale**)
- **average earnings** in months worked over 18 months (%, **upper scale**)

Males



Females



Thank you!

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INTERNATIONAL FINANCE CORPORATION
MULTILATERAL INVESTMENT GUARANTEE AGENCY

Scientific research: Latvia: "Who is Unemployed, Inactive or Needy? Assessing Post-Crisis Policy Options"

PROFILING OF PEOPLE WITH NO OR LIMITED LABOR-MARKET ATTACHMENT AND OF LOW INCOME

Céline Ferré, Herwig Immervoll and Emily Sinnott

June 2013

European Social Fund Activity

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European Social Fund Activity
"Complex support measures" No. 1DP//1.4.1.1.1./09/IPIA/NVA/001

Who is unemployed or receiving welfare benefits in Latvia? Anatomy of joblessness, marginal employment and benefit dependency

Céline Ferré, Herwig Immervoll and Emily Sinnott

1. Introduction

A common insight from policy evaluations of both employment and social support measures is that careful targeting is crucial for the success of activation and poverty reduction strategies. This is especially the case when the group of potential policy "clients" is growing and becoming more heterogeneous, as is the case in Latvia today.

Unemployment in Latvia increased dramatically at the onset of the economic crisis in 2008 and, while down significantly from its peak in early 2010, remains more than twice as high as before the crisis (Figure 1).[1] With job losses mounting during the early phase of the recession, the share of long-term unemployed declined initially before reaching 50 percent and more in 2010. However, as is typical for the aftermath of deep recessions, long-term unemployment is now falling only very slowly and remains at a very high level even as unemployment rates decline. In addition, unemployment trends do not capture the full extent of labor market detachment. As more and more job seekers queue for available employment vacancies in a labor-market downturn, a growing number of jobless become discouraged, stop actively looking for work, and are therefore no longer counted as unemployed. As a result, inactivity rates can remain high or keep growing, even as unemployment rates decline. In Latvia, the share of labor-market inactivity remained close to 40 percent throughout 2010, despite unemployment rates dropping by as much as one fifth.

Monitoring and responding to the greater diversity of labor market difficulties is one of the key challenges of social and employment policy during and after a recession. For instance, while recent job losers are likely to be relatively well placed to engage in self-directed job search and may initially only require limited "active" employment support services, long-term unemployed or discouraged workers typically face more formidable employment barriers calling for more comprehensive intervention and support.

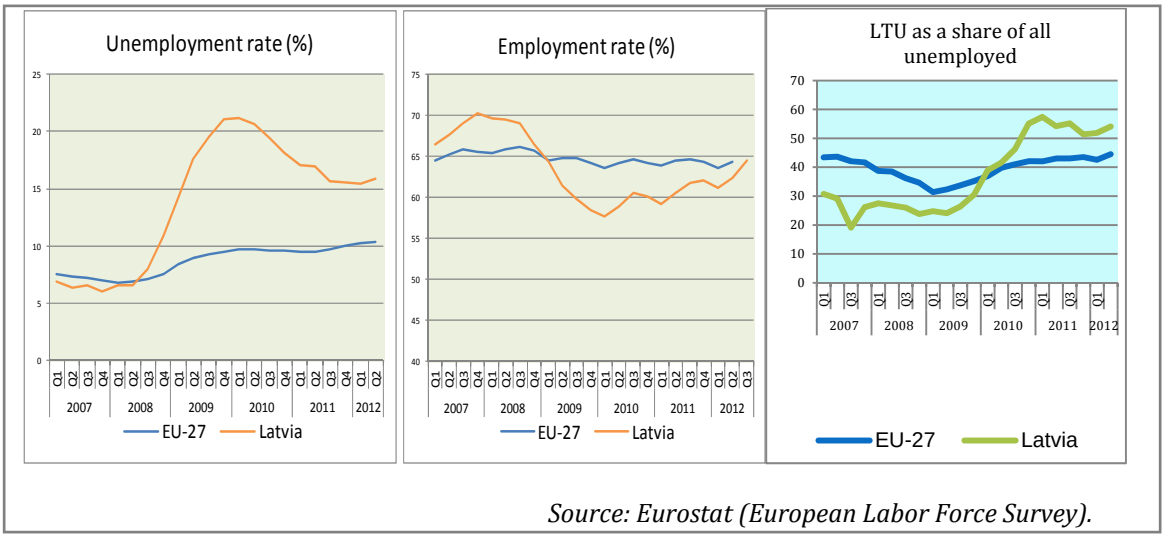
For a number of reasons, careful targeting and customizing of "passive" income support also becomes more important when labor markets are weak. First, there are a greater number of households facing severe economic challenges; making income transfers available to those who need them most therefore becomes more pressing. Second, prolonged labor-market weakness can heighten concerns about long-term benefit dependency. Tailoring financial support to individual and family circumstances can then be an important part of strategies to maintain beneficiaries' incentives to regain self-sufficiency. Finally, fiscal pressures intensify the search for ways to target and refocus social spending.

This paper aims to strengthen the empirical basis for designing and targeting income support and activation policies. It will use survey data to identify relevant groupings and characteristics of benefit recipients and of individuals with no or limited labor-market attachment. Recognizing that those with limited or no attachment to the labor market are a highly heterogeneous group, it seeks to contribute

[1] See also Vanags (2012).

policy-relevant information on the types of social and economic risks that different groups are facing, and on the barriers that hold back their labor-market integration. The resulting information can facilitate an effective targeting of policies that seek to alleviate these barriers. For instance, information on the characteristics of benefit recipients or of labor-market inactive working-age individuals can be a basis for identifying which groups are and are not served effectively by existing activation and support policies, and for channeling policy efforts towards specific priority groups.

Figure 1: After a recession, labor market difficulties are more widespread and probably more varied



Source: Eurostat (European Labor Force Survey).

The extent and categories of labor market difficulty in Latvia are set out in section 2. The aim is to move beyond analyzing the situation of the registered unemployed, and to cover the entire potential workforce that suffers from limited labor market attachment. Those outside or on the margin of the labor market are frequently moving between non-employment and different states of "precarious" employment. As a result, looking only at some of these states (e.g., unemployment) would not capture the true extent of labor-market difficulties or the need for policy intervention. To provide a comprehensive view on recent labor market challenges, the paper therefore develops a broad concept of "weak labor market attachment", including unemployment, inactivity, informal work as well as sporadic or low-paid work. The section gives the definitions used and sources of data. Section 3 outlines the characteristics of groups who are facing severe labor market difficulties. It uses household survey data to characterize groups of people showing weak labor-market attachment over extended periods of time. Section 4 identifies the main groups with persistent labor-market difficulties. The aim is to group together individuals with similar characteristics using a wide range of demographic, family, social and labor-market characteristics. This provides policymakers and caseworkers information on the differing needs of the various groups experiencing labor market difficulties in Latvia. In section 5, the paper concludes with a discussion of the targeting of employment and income support to the identified groups.

The paper is linked to World Bank (2013a), which focuses on recipients of welfare benefits (guaranteed minimum income (GMI) and other benefits). Using administrative data for selected cities, World Bank (2013a) documents the rise in benefit recipiency and the incidence of benefit receipt among different population groups. The data is then used to reconstruct benefit spells for each recipient in order to

investigate whether welfare benefit receipt has been largely a temporary phenomenon or whether recipients have typically been long-term dependent on these state benefits.

This paper also complements the existing report on barriers to employment commissioned by the State Employment Agency (SEA).[2] The results displayed here may differ from the former, as the main analysis here uses longitudinal data, the datasets and years of reference are different from the SEA report, the type of information collected (and thus the type of information that can be used) is more quantitative than in the SEA survey, and the population of interest is not the same: While the the SEA report focuses on unemployed individuals at a given point of time, the present study comprises a larger group of individuals with longer-lasting or repeated labor market problems, including the inactive and informal.

2. *Joblessness and weak labor-market attachment*

Extent and types of employment difficulties

Spells of unemployment are a necessary element of a market-based growth process. If job reallocation is efficient, in the sense that jobs move from less productive to more productive firms or sectors, then it leads to a more productive economy and to higher incomes. This is especially true after deep recessions, which tend to be associated with significant restructuring and changes in the sectoral composition of an economy.

Box 1: Data and definitions

Data: two panel datasets: EU-SILC 2006/9 and EU-SILC 2007/10.

Definition of vulnerability: an individual is considered vulnerable (V5) if he is experiencing the following situation during at least half of the observed years:

- "Not working" (V1): not reported to have worked during any month of the year, or no labor income

- "Low work intensity" (V2): employed or self-employed at least one, but no more than six months during the year

- "Low earnings" (V3): labor income less than 80 percent of the full-time, full-year minimum wage

- "Informal" (V4): positive labor income but no (employer) social security contributions, or labor income is mainly earned in kind, or the person reports being an unpaid family worker

These four categories are not mutually exclusive, and an individual could for instance be engaged in informal work (V4) and receiving low earnings (V3).

Population of interest: vulnerable working-age individuals (aged 18 to 61) in each model constitute the population of interest.

Different barriers can, however, prevent or slow an efficient job reallocation, creating significant economic and social costs.[3] For some groups, a combination of policy-related barriers and insufficient

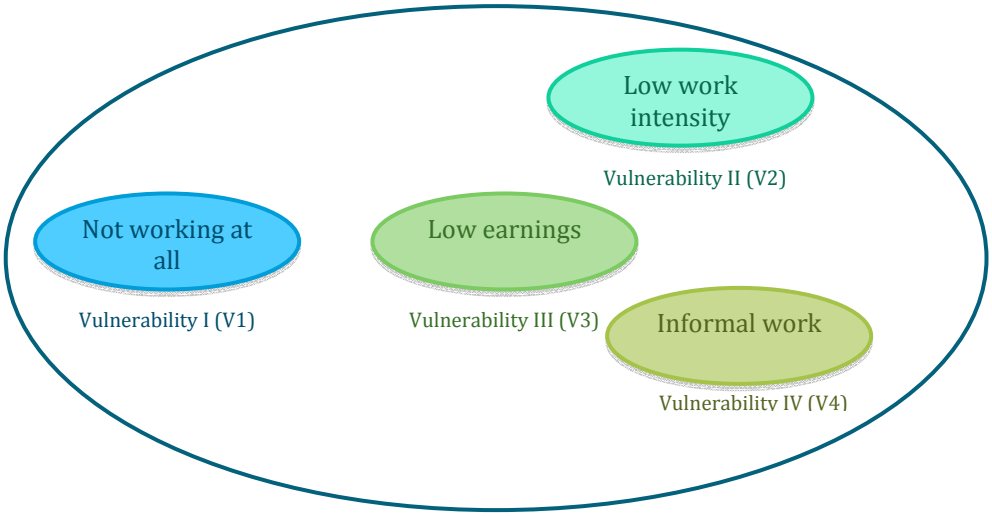
[2] "Development of method for classification/profiling of unemployed" prepared by Consortium Ltd "Projektu un kvalitātes vadība," Ltd. E-Synergy under ESF project "Improvement of Management Capacity of SEA," No. 1DP/1.3.1.4.0/08/IPIA/NVA/001.

[3] For instance, inadequately resourced or poorly targeted re-employment services reduce the quality of matches between job seekers and job vacancies. Ineffective income support for jobseekers can have a similar effect. On the one hand, insufficient support can prevent jobseekers from engaging in a thorough search for suitable vacancies, or force them to accept low-productivity or informal jobs that do not adequately use or remunerate their skills. On the other hand, overly

skills or work experience means that they remain "stuck" without a job or in marginal employment for extended periods of time. Long-term labor-market marginalization or detachment is known to erode human capital and reduce both current incomes and future earnings prospects. Addressing the causes of long-term labor-market difficulties, and alleviating their consequences, is therefore a crucial challenge for labor-market and social policy.

With long-term unemployment rising, one would expect a large number of individuals in Latvia to be "stuck" without work. A weak labor market may also be expected to push up the number of people with sporadic, low-paid or informal work. But in this latter respect, the impact of the recession is in fact not entirely clear-cut. On the one hand, a much weaker labor market is likely to make people more willing to engage in low-paid, temporary or non-declared employment activities as a "second best" income source. Employers who are under pressure to reduce costs will also seek to make greater use of lower-cost alternatives to regular employees. However, on the other hand, informal workers and others with no or little employment protection frequently assume a "buffer" function that helps firms to increase capacity during a boom, without increasing fixed costs. Typically, these jobs are then the first ones to go in a downturn.

Figure 2: Four different types of labor-market difficulties

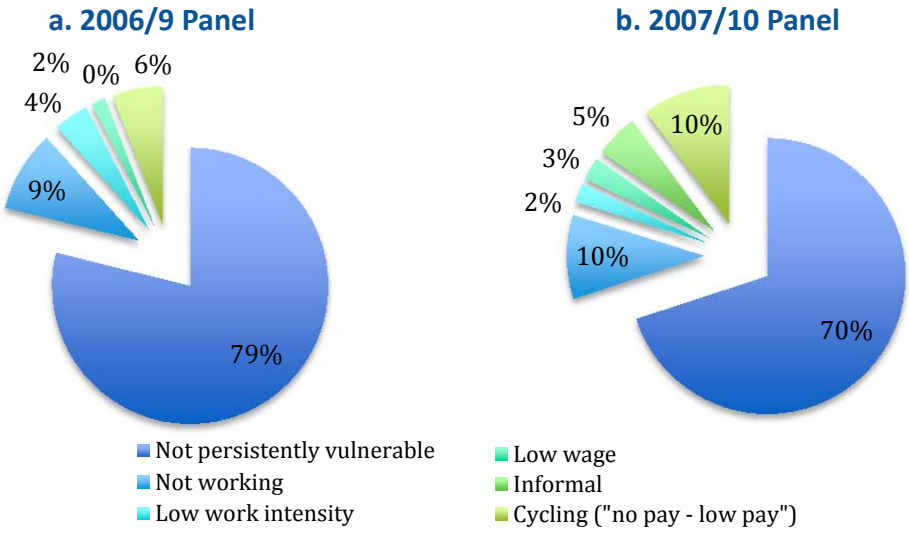


Using the Survey of Income and Living Conditions (SILC) that follows individuals over a four-year period, it is possible to examine these trends, and the histories of people's labor-market experiences, in some detail. We distinguish between four different types of labor-market difficulties: not working at all ("vulnerability I (V1)", which includes both the unemployed and the inactive), working only a few months during the year - "low work intensity" - ("vulnerability II (V2)"), low earnings ("vulnerability III (V3)"), and informal work ("vulnerability IV (V4)"). The definitions are summarized in Box 1. Some of

generous or unconditional out-of-work support can delay or weaken job search activities. The relative importance of the different barriers is likely to vary with economic conditions. For instance, evidence summarized in a companion paper shows that when labor markets are weak, adverse work incentives are a less relevant determinant of employment outcomes (World Bank, 2013c, and Immervoll, 2012).

those categories can overlap (e.g., those working informally or sporadically will typically have a higher risk of low earnings). The groupings are shown schematically in Figure 2.

Figure 3: Broad categories of persistent labor market difficulties



Notes: Persistence is defined as experiencing the relevant status during at least one half of the observed years using the following categories. "Not working" (V1): not reported to have worked during any month of the year, or no labor income. "Low work intensity" (V2): employed or self-employed at least one, but no more than six months during the year. "Low earnings" (V3): labor income less than 80 percent of the full-time, full-year minimum wage. "Informal" (V4): positive labor income but no (employer) social security contributions, or labor income is mainly earned in kind, or the person reports being an unpaid family worker. "Cyclers": those who are in more than one of these categories during the period. In all cases, those who are in education or in military service during most of the year are not categorized as facing labor market difficulties (and are therefore not in either of the above categories).

Informality is not captured by the longitudinal data spanning 2006/2009 as it does not record employers' contribution to social security for every year, so we did not use the "informal work" variable. The longitudinal data spanning 2007/10 does record employer's social security contribution for every year, and we use this information to identify informality (see Box 1).

Source: World Bank staff calculations based on the Latvian version of EU-SILC, waves 2007-2010 and 2008-2011 (with 2006 to 2009 and 2007 to 2010 as the reference year for incomes and activity calendars).

Between 2007 and 2010, as many as one third of working-age individuals are either out of work or in marginal employment in at least half of the observed years (Figure 3, panel b). Only a minority of them (10 percent of working-age individuals) are persistently jobless. Almost as many have an informal, low-paying or unstable job. And about the same number again move between no job and marginal or sporadic work or are in more than one of these categories at the same time (e.g., informal and low earnings). This pattern indicates that persistent labor-market difficulties are indeed far from one-dimensional. In particular, they go beyond long-term unemployment and therefore require an assessment of a broad range of out-of-work and in-work situations.

As one would expect, persistent labor market difficulties have become more common after the start of the downturn: while 21 percent of the population were persistently vulnerable between 2006 and 2009, the same figure for 2007-2010 rises to 30 percent of the population of working age (see Figure 3). The proportion of individuals not working or cycling between low pay and no pay have both increased with the crisis, from respectively 9 to 10 percent and 6 to 10 percent. On the other hand, low work intensity has gone down from 4 to 2 percent. One must be cautious though, as part of the rise in vulnerability from 2006/9 to 2007/10 is due to the inclusion in the later panel of informality (which mechanically increases the number of vulnerable individuals).

3. *What characteristics are associated with persistent labor-market difficulties?*

This section takes a closer look at individuals categorized as experiencing persistent labor-market difficulties (PLD) above. The information presented complements commonly used labor-market statistics in several ways:

- It accounts for labor-market experience over a longer period, rather than at a specific point in time;
- It is multi-dimensional, meaning that it accounts for a whole range of potentially relevant characteristics (e.g., age, gender, number of children, education and work experience), rather than only one dimension at a time. This allows for a more detailed examination of the factors that are positively or negatively associated with risks of persistent joblessness or precarious employment; and
- It considers both individual and family characteristics. Family circumstances are central for designing and targeting employment and income support measures. Understanding them is arguably especially important during and after a severe downturn as families can provide essential income stabilization following earnings losses of one family member.

Table 1 reports the main results of a simple statistical model, which relates PLD status during a four-year period to a broad range of potentially relevant individual and family characteristics. This format is convenient for investigating which of a large number of factors are associated with a higher risk of PLD. The regression approach is particularly helpful for disentangling the importance of different factors that are typically correlated (such as sex, family status and work experience), which cannot be done using simple cross tabulations.

A number of individual and household characteristics clearly increase the probability of being at risk of PLD (positive coefficient): age, illness, being a single parent, having 3 children or more, sharing the household with a sick person, living in a rural area, any labor status other than working full-time, low qualified jobs. By contrast, more work experience, education, as well as having an occupation that requires higher qualification levels reduces the risk of PLD (negative coefficient). Higher partner income also appears to reduce the risk of PLD. This may be surprising, as individuals who share resources in the same household may be expected to work less when household income goes up. The result indicates a significant degree of "assortative matching" (those with higher incomes partner with high-income individuals and vice versa), and that persistent labor-market difficulties may frequently affect more than one household member at the same time.

Table 1: Factors associated with a higher or lower PLD risk (2007-10 Panel)

Logistic regression			**Number of observations = 4,908**			
Dependent variable: Persistent vulnerability (V5)			**LR $\chi^2(39)$ = 1,035,606**			
			Prob > χ^2 = 0			
Log likelihood = -967,467			**Pseudo R^2 = 0.3486**			
Vulnerability status	***Coefficient***	***Std. Err.***	***z***	***P>z***	***[95% C.I.]***	
Constant	-5.517	0.094	-58.73	0.0	-5.70	-5.33
Age	0.173	0.007	23.58	0.0	0.16	0.19
Age squared	0.068	0.019	3.69	0.0	0.03	0.10
Age cube	-0.016	0.002	-10.87	0.0	-0.02	-0.01
Experience	-0.184	0.001	-149.91	0.0	-0.19	-0.18
Experience squared	0.088	0.003	32.54	0.0	0.08	0.09
Dummy (female)	-0.776	0.007	-116.24	0.0	-0.79	-0.76
Dummy (ill/sick)	0.273	0.005	58.42	0.0	0.26	0.28
Dummy (in a relationship)	0.150	0.007	21.67	0.0	0.14	0.16
Dummy (single parent)	0.316	0.068	4.65	0.0	0.18	0.45
Dummy (children <6 years old)	-0.382	0.008	-49.17	0.0	-0.40	-0.37
Dummy (3+ children)	0.060	0.003	18.51	0.0	0.05	0.07
Dummy (>59 years old)	-0.035	0.005	-7.36	0.0	-0.04	-0.03
Dummy (partner vulnerable)	0.000	0.000	-49.12	0.0	0.00	0.00
Dummy (other family member ill)	0.111	0.006	18.76	0.0	0.10	0.12
Log (partner income)	-0.028	0.001	-25.95	0.0	-0.03	-0.03
Female * Low education	0.469	0.007	71.17	0.0	0.46	0.48
Female * High education	-0.510	0.007	-68.78	0.0	-0.52	-0.50
Female * In a relationship	0.003	0.008	0.35	0.7	-0.01	0.02
Female * Single Parent	0.341	0.070	4.89	0.0	0.20	0.48
Female * Children <6 y.o.	1.072	0.010	104.89	0.0	1.05	1.09
Female * 3+ children	0.276	0.008	35.64	0.0	0.26	0.29
Female * Other family member ill	-0.235	0.008	-28.68	0.0	-0.25	-0.22
Rural	0.012	0.004	3.11	0.0	0.00	0.02
Economic status (omitted = working full-time)						
Working part-time	1.276	0.008	155.54	0.0	1.26	1.29
Unemployed	2.440	0.007	326.47	0.0	2.42	2.45
Pupil, student, training	0.441	0.014	31.62	0.0	0.41	0.47
Retirement	3.450	0.016	220.56	0.0	3.42	3.48
Disabled/unfit for work	3.805	0.016	232.73	0.0	3.77	3.84
Domestic tasks	3.347	0.014	241.63	0.0	3.32	3.37
Other inactive	2.516	0.016	159.77	0.0	2.49	2.55
Occupation status (omitted = crafts workers)						
Legislators/senior officials/managers	-0.241	0.013	-18.79	0.0	-0.27	-0.22
Professionals	-0.262	0.011	-23.65	0.0	-0.28	-0.24
Technicians/associate professionals	0.258	0.010	25.78	0.0	0.24	0.28
Clerks	0.042	0.014	2.96	0.0	0.01	0.07
Service workers/shop/market workers	0.721	0.010	73.45	0.0	0.70	0.74
Skilled agriculture/fisheries	1.940	0.014	138.49	0.0	1.91	1.97
Crafts workers	0.678	0.009	73.89	0.0	0.66	0.70
Elementary occupations	1.307	0.009	141.73	0.0	1.29	1.33
Not working	0.255	0.010	25.82	0.0	0.24	0.27

Note: see Annex for complete definition of variables.
Source: World Bank staff calculations based on the Latvian version of EU-SILC, waves 2008-2011 (with 2007 to 2010 as the reference year for incomes and activity calendars).

Interestingly, when controlling for other characteristics, such as education levels, women are less likely to experience PLD (negative coefficient for variable *Dummy (Female)*). However, women with greater

family responsibilities, such as caring for a young child (*Female * Children <6 y.o.*) are much more likely to have persistently weak labor-market attachment. Partnered individuals (*Dummy (in a relationship)*) (as opposed to those who are single, divorced or widowed) are at a greater risk.

4. *What are the main groups with persistent labor-market difficulties?*

The results in Section 3 provide pointers for understanding specific *individual* risk factors that are associated with a higher probability of persistent joblessness or marginal employment. However, designing and targeting employment and income support measures also requires knowledge about on the *combined* characteristics of people affected by PLD. For instance, case workers at the employment office or the benefit administration need to have as full a picture as possible about their clients' education, income, family situation, health status and work experience. This is something that the regression approach, which focuses on one factor at a time, cannot provide.

To fill this gap, this section identifies the size and characteristics of different PLD groups. This is done using a variant of a statistical clustering approach. The basic idea behind this is to cluster people into groups that are both meaningful statistically and useful for policy purposes. This means

- that group members should be similar to each other,
- that members of different groups should be dissimilar, and
- that the characteristics used to define group membership should be observable by policymakers, administrators or caseworkers.

Box 2 provides more details on the statistical approach used to search for suitable groupings over a wide range of demographic, family, social and labor-market characteristics. The result of this exercise is a set of groups characterized by similar characteristics of members within each group, and dissimilar characteristics between groups.

Box 2: Approaches to identifying the meaningful subgroups

Latent Class Analysis (LCA) enables a characterization of categorical *latent* (unobserved) variables from an analysis of the structure of the relationships among several categorical *observed* variables. LCA is thus "the classification of similar objects into groups, where the number of groups, as well as their forms are unknown" (Kaufman and Rousseeuw, 1990). The method was originally conceived of as an analytic method for survey data. As an exploratory technique, LCA can be used to reduce a set of several categorically scored variables into a single latent variable with a set of underlying types or "classes". As a confirmatory method, the latent class model can be used to test hypotheses regarding the researchers' a priori assertions about the structure of the relationship among the observed variables. In this paper, LCA was used as an exploratory technique to find an "optimal" number of groups of individuals at risk of poverty with the most similar characteristics.

The LCA model can be seen as a probabilistic or model-based variant of traditional non-hierarchical cluster analysis procedures such as the K-means method. Contrary to traditional ad-hoc clustering approaches, the LC approach to clustering is model-based. The fundamental assumption underlying LCA is that of *local independence*, which states that observations (AROPE (At Risk Of Poverty or social Exclusion) individuals in our case) in the same latent class share a common *joint probability distribution* among the observed variables. Since persons in the same latent class (cluster) cannot be distinguished from each other based on their observed responses, they are similar

to each other (homogeneous) with respect to these observed variables. Individuals are hence classified into the class for which they have the highest posterior probability of belonging, given their observed characteristics.

LCA is thus most similar to the K-Means approach to cluster analysis in which cases that are "close" to one of K centers are grouped together. In fact, LCA can be viewed as a probabilistic variant of K-Means clustering where probabilities are used to define "closeness" to each center. As such, LCA provides a way not only to formalize the K-Means approach in terms of a statistical model, but also to extend the K-Means approach in several directions: flexible distance to the center of the cluster, determination of the optimal number of clusters, inclusion of categorical and continuous variables, and inclusion of exogenous variables. First, while K-Means uses an ad-hoc distance measure for classification, the LCA approach allows cases to be classified into clusters using model based posterior membership probabilities estimated by maximum likelihood (ML) methods. Second, LCA provides various diagnostics such as the BIC statistic, which help determine the "optimal" number of clusters. Third, while K-Means clustering is limited to interval-scale quantitative variables, for which Euclidean distance measures can be calculated, LCA can be performed on variables of mixed metrics (continuous, categorical (nominal or ordinal), or counts or any combination of these). Fourth, the LCA model can be easily extended to include exogenous variables (covariates).

The LCA model with covariates can be written as:

$$f(y_i|z_i) = \Sigma_k \, p(x=k|z_i) \, f(y_i|x=k)$$

where y_i is a vector of dependent (endogenous) indicators for individual i, z_i is a vector of independent (exogenous) covariates for individual i, x is a nominal latent variable (and k denotes a class, $k=1,2,...,K$), and $f(y_i|x=k)$ denotes the joint distribution specified for y_i given latent class $x=k$.

For continuous y_i, the multivariate normal distribution is used with class-specific means. In addition, the within-class covariance matrices can be assumed to be equal or unequal across classes, and the local independence assumption can be relaxed by applying various structures to the within-class covariance matrices. For variables of other/mixed scale types, local independence among the variables imposes restrictions on second-order as well as to higher-order moments.

For this note, vulnerable individuals in each model constitute the population of interest. Analyses were carried out using persistent vulnerability: population of individuals who were vulnerable in at least one half of the observed four consecutive years. The population was then restricted to working-age population (individuals aged 18 to 61). Age categories, gender, civil status, education, experience, economic status, household composition, chronic illness, type of vulnerability, partner's vulnerability status and log-income, urban/rural breakdown, represent the *observed covariates* and were used to predict the vulnerability status. In addition to these active covariates, exogenous variables (*inactive covariates*) were included in the model, such as vulnerability index, mean labor income, difficulties to pay (heating, arrears), housing ownership, whether the individual is actively looking for a job, and size of social protection transfers. The inactive covariates do not influence the division of the population of interest into clusters: they are added for the descriptive statistics and help the reader understand the composition of the groups.

Two longitudinal analyses were conducted. For each of them, the LCA model was run with one to fifteen classes, thus leading to fifteen different estimations. To determine the optimal number of clusters into which the population of interest should be divided, we used two criteria that maximize the cohesion within clusters and the distance between clusters: the Akaike and Bayesian Information Criterion (AIC and BIC). Choosing the "optimal" number of clusters is not always scientific as often, neither the AIC nor the BIC reach a minimum. When that is the case and there seem to be several "potential" optimums, the final number of clusters chosen was determined by the steepness of the AIC and BIC curves in combination with the size of the clusters and researchers' experience.

As an illustration, Table 2 shows two examples of the resulting groups of PLD individuals. In order to focus on the main variables that characterize these groups, the example shows only those characteristics

that turn out to be helpful for distinguishing the group from others (the subset of characteristics shown therefore mainly differs between the two groups). The illustrations show that the clustering method is able to separate groups quite sharply along some of the characteristics. For instance, almost all individuals in Group A were women but just over one quarter in Group B. Likewise, Group A members had above-average education levels (just under 30 percent had completed a tertiary education), while nearly half of Group B had not completed secondary education. Only very few individuals in Group A, but a large majority in Group B, have a spouse or partner who is also facing PLD. Members of both groups live with a spouse or partner and have children (under 6 years of age), so this is not a distinguishing feature. But as will be shown below, it sharply separates both groups from a number of other groups that are made up mostly of unmarried or childless individuals.

Other characteristics vary more widely within groups. While most women in Group A were not persistently without a job, a sizeable majority of them are. And although there is, relative to other groups of similar age, an above-average incidence of chronic illness in Group B, the majority of the group does not report long-lasting health problems. In these and in other cases, individuals who differ in certain respects are nonetheless grouped together if they are, in a statistical sense, otherwise "sufficiently similar".

Table 2: Groups with persistent labor-market difficulties - An illustration

Panel A

Group 4 "stay-at-home mums with small child and working partner"	
age 25-34	69%
married/cohabiting	86%
female	94%
tertiary education	29%
child < 6 y.o	94%
work experience>1yr	87%
not Informal	98%
spouse PLD	11%

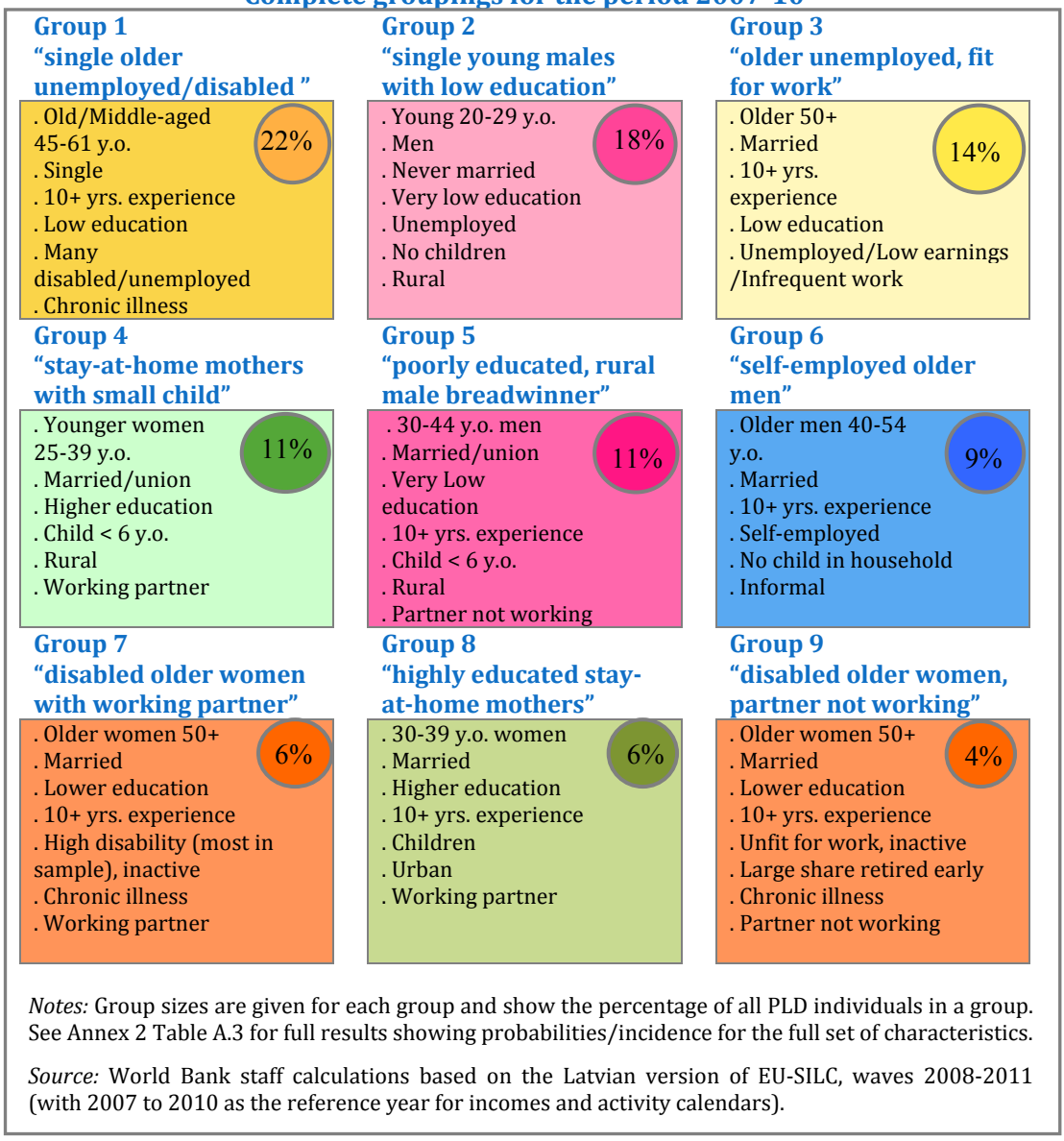
Panel B

Group 5 "poorly educated, rural male breadwinner"	
age 30-44	61%
married/cohabiting	92%
male	76%
tertiary education	5%
child < 6 y.o	53%
work experience>10yr	54%
persistently low paid	45%
spouse PLD	74%

The statistical clustering tool provides probabilities for characteristics of group members but not, of course, specific labels for these groups. Results can nevertheless be useful as a basis for thinking about group labels. There are a large number of characteristics so care must be taken to resist oversimplifications, and to keep arbitrary judgments to a minimum. With this in mind, careful labeling can be useful as a basis for discussing suitable policies for each of the groups. The labels shown in Table 2 illustrate an attempt to find suitable labels that are capture relevant group characteristics.

The full set of groups is visualized in Figure 4 showing, again, only those characteristics that are particularly relevant for distinguishing each of the groups from the others. (Annex 1 Table A.1 provides a list of all characteristics that were used as an input into the clustering analysis, along with their definition, while Annex 2 Tables A.2 through A.3 show detailed results for all groups and their entire set of characteristics). Labels have been derived using the same procedure as illustrated in Table 2 and the most sizable group is shown first.

Figure 4: Groups with persistent labor-market difficulties
Complete groupings for the period 2007-10



Notes: Group sizes are given for each group and show the percentage of all PLD individuals in a group. See Annex 2 Table A.3 for full results showing probabilities/incidence for the full set of characteristics.

Source: World Bank staff calculations based on the Latvian version of EU-SILC, waves 2008-2011 (with 2007 to 2010 as the reference year for incomes and activity calendars).

The clustering approach has partitioned the PLD population into nine separate groups of varying sizes: 4 to 22 percent of the total PLD population (see Figure 4). Out of these nine groups, emerge populations that may commonly be associated with labor-market vulnerability. But there are also a number of groups that one may not typically see as vulnerable, or that may not be a focus of the policy debate at all.

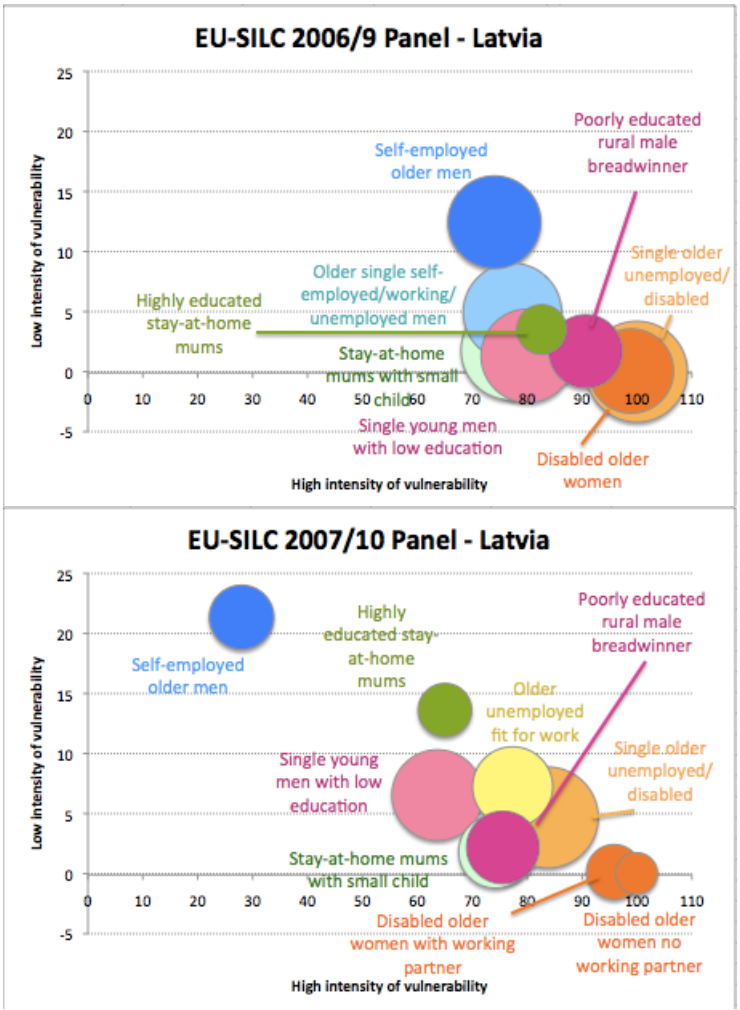
- As expected, older individuals with chronic illnesses represent a large chunk of the PLD population: three of the groups consist of a majority of chronically ill, old individuals who are out of the labor force (unemployed, unfit for work or at home) who worked more than 10 years (Groups 1, 7 and 9). The largest group (Group 1, 22 percent of all PLD) consists of divorced or never married unemployed and disabled, the second group (Group 7, 6 percent of all PLD) consists of married older women with a working partner with the highest level of disability out of all groups, and the smallest group (Group 9, 4 percent) is mainly made of married women, many of whom are unfit for work or have retired early, whose partner is also not working.
- Similarly, young or "prime-age" less-educated individuals are well represented within the PLD population. The largest group is made of young married men, many of whom are 20 to 29 years old, with very low levels of education (many have not completed secondary education), and constitutes the second largest PLD group (Group 2, 18 percent). A smaller group (Group 5, 11 percent) is made up of married men, 30 years and older, with again very low levels of education with children and a non-working partner. In both cases, men are divided between individuals who worked full-time in the past and those who mainly remained unemployed during the four years of the study.
- Finally, two groups emerge which would not have been suspected to be vulnerable: women with a relatively high level of education and self-employed older men. The first group (Group 4, 11 percent) includes young married (or civil union) women, who have in the past worked full-time and with young children (less than 6 years old). The second group (Group 8, 6 percent) consists of 30-39 year-old urban women, working full-time, unemployed or at home, with children. The last group (Group 7, 9 percent) consists of older men more likely to be self-employed. Informal employment (V4) is the principal reason why these older men are included in the PLD population.

Looking across groups, it is notable that four groups consist of unemployed individuals and full-time workers: there is no group where PLD is a sole result of persistent joblessness. Thus a large majority of individuals are not persistently unemployed or inactive but do engage in some formal or informal market work during most of the years in our sample. This indicates that limited labor market attachment is frequently not a result of lacking motivation or an inability to work. Some of the possible policy implications of these patterns will be discussed in the ALMP and social benefits notes being prepared as part of this project, which will ask whether some groups are, or should be, a particular priority for employment and income support.

Before looking at the individual groups more closely, it is useful to examine the consequences of the economic crisis for the composition and the heterogeneity of the PLD groups. Figure 3 above has already shown that the size of the PLD group has increased after 2009. The introduction of this report has argued that the greater number of newly unemployed in a recession, and the continually weak labor-market conditions in its aftermath, is likely to result in a significantly more diverse group of people experiencing labor-market difficulties and, hence, requiring policy support. When applying the clustering approach to an earlier panel (2006-2009), and comparing against the results for 2007-2010, we indeed find evidence that PLD after the recession affects not only a greater number of people, but also a significantly different range of population groups.

This is shown in Figure 5, which visualizes the same clustering analysis done on the two different panel waves: 2006/9 and 2007/10. Clusters that represent similar populations are represented with the same colors. The two graphs record a very similar number of clusters (eight and nine), so despite an increase in PLD individuals, the number of subgroups has not increased by much. Neither has the intensity of vulnerability much changed, with most clusters recording high proportions of high risk individuals and low proportions of low risk individuals. However, one can spot several important changes between the two waves.

Figure 5: PLD groups by intensity of vulnerability: Compare 2006/9 and 2007/10 panel



Notes: Intensity of vulnerability was calculated using the statistical model of persistent labor-market difficulties presented in Section B.2, Table 1. The estimated coefficients were used to calculate a probability of experiencing PLD. Those with a score in the bottom/top third of the whole working-age population (i.e., the 33 percent with the lowest/highest risk) were then classified as "low risk"/"high risk".

Source: World Bank staff calculations based on the Latvian version of EU-SILC, waves 2007-2010 and 2008-2011.

First, of the groups that are present in both panels, most have changed relative size and intensity of vulnerability. The elderly and chronically-ill were split into two large groups in the earlier round (dark and light orange), and combined into three smaller groups in the later round (dark and light orange). In both 2006/9 and 2007/10 these groups represented around 240 thousand individuals, but because of the growing number of people experiencing PLD, they are a much smaller proportion of the PLD group in 2007/10. In addition to shrinking in terms of their relative size as a proportion of the overall population experiencing work difficulties, these groups of elderly and chronically ill became also less at risk with a larger proportion of these groups having high intensity of vulnerability.

Second, some groups existed in the first round but then disappeared in the second one: the group of more educated self-employed men (dark blue) who are vulnerable due to the informal nature of their work shrunk by half in the 2007/10, and stand out as the group with the highest proportion of low vulnerability individuals. Similarly, the group made up of old single self-employed individuals, working full-time or unemployed (light blue) appear only in the 2006/09 period where they represent the third largest share of the PLD population.

Third, all groups shift away from lower intensities of vulnerability towards a larger share of high intensity of vulnerability.

Fourthly, employment status had a good explanatory power in the later round, splitting groups rather well, while in the 2006/09, in four groups out of eight, full-time employment is mixed with unemployment.

5. *Conclusions: Targeting employment and income support*

Long-term labor-market difficulties can lead to economic hardship for the individuals and families concerned. With labor income being the primary income source for working-age people and their families, extended spells without adequately paid employment leave families financially vulnerable and with a high risk of poverty. Some groups are, however, better able than others to cope with low or no labor income. They may have access to other income sources (including state benefits), they may receive support from other household members or from extended family, or they may have savings they can draw upon.

A large majority of households with vulnerable individuals is receiving social transfers: in the 2007/10 EU-SILC panel, between 76 and 100 percent of the households in each cluster receive one social transfer or more (see Table 3). In addition, social transfers seem to be generally quite well targeted: the clusters with the highest proportion of unemployed (groups 1 through 5 with respective unemployment probabilities of 34, 35, 42, 15, and 43 percent) also appear to be the clusters that have the greatest access to unemployment benefits (respectively 16, 13, 25, 24 and 23 percent). As expected, households with a high probability of having children (groups 4, 5, and 8), have the largest probabilities of receiving family benefits (respectively 99, 85 and 62 percent). The same story goes for disability, where groups 1, 7, and 9 have respective probabilities of receiving the disability transfer of 27, 32, and 31 percent. Older households (groups 1, 3, 7, and 9), also have the highest probability of receiving an old-age pension (respectively 9, 8, 7 and 9 percent).

Table 3: Access to Social Transfers by Group (2007-2010)

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
		Old, never married/divorced, 10+ yrs exp, unemployed, no child, ill	Young men, never married, low education, FT/unemployed, no child, rural	Old, married, 10+ yrs exp, unemployed, no child, V2, V3	Younger women, married, high education, FT, young child, rural	30-40 y.o. men, married/union, low education, 10+ yrs exp, unemployed/FT, children, partner vulnerable rural	Older men, married, 10+ yrs exp, FT, self-employed, no child, V4	Old women, married, 10+ yrs exp, unfit for work/at home, no child, ill, V1	30-40 y.o. women, married, high education, 10+ yrs exp, FT/unemployed/at home, children, urban	Old women, married, low education, 10+ yrs exp, unfit for work/at home/ unemployed, no child, ill, V1, partner vulnerable
SOCIAL BENEFITS (participation)	Any benefit	78.9	84.3	84.0	100.0	92.3	76.1	86.6	83.3	93.3
	Family	19.3	37.5	32.0	99.3	84.7	58.3	37.2	62.1	55.2
	Social Exclusion	9.0	6.8	5.6	12.6	15.6	2.9	7.5	7.0	2.7
	Housing	8.8	7.5	4.3	6.5	9.6	0.7	1.8	0.3	4.8
	Unemployment	16.1	13.3	26.4	24.0	23.0	1.0	3.3	17.4	6.0
	Sickness	8.8	9.9	13.1	19.8	3.5	5.8	0.6	14.1	2.6
	Disability	27.2	8.2	14.3	0.2	10.3	1.5	32.6	2.2	31.0
	Old-age	8.5	0.2	8.0	0.0	0.3	1.7	6.9	1.9	9.4
	Survivor	3.8	2.5	0.5	0.8	0.3	0.0	0.1	0.4	1.4
SOCIAL BENEFITS (share of HH benefit in HH disposable income, HH receiving the benefit)	Any benefit	55.5	29.1	29.6	27.7	36.6	15.1	28.8	13.6	66.6
	Family	2.4	4.1	2.5	13.9	13.7	4.6	3.1	6.0	11.9
	Social Exclusion	1.5	0.8	0.6	1.2	2.4	0.5	0.7	0.1	1.0
	Housing	0.9	0.6	0.4	0.6	0.6	0.2	0.2	0.1	0.3
	Unemployment	5.6	5.1	6.0	6.7	9.0	1.4	2.8	3.0	8.7
	Sickness	1.4	2.0	2.1	2.0	0.7	0.6	1.4	1.4	0.7
	Disability	17.5	5.7	6.0	1.0	5.1	1.2	12.0	0.4	23.8
	Old-age	6.0	1.5	3.1	0.3	0.2	0.2	4.0	0.6	6.4
	Survivor	1.8	0.9	0.2	0.2	0.9	0.2	0.1	0.1	0.7

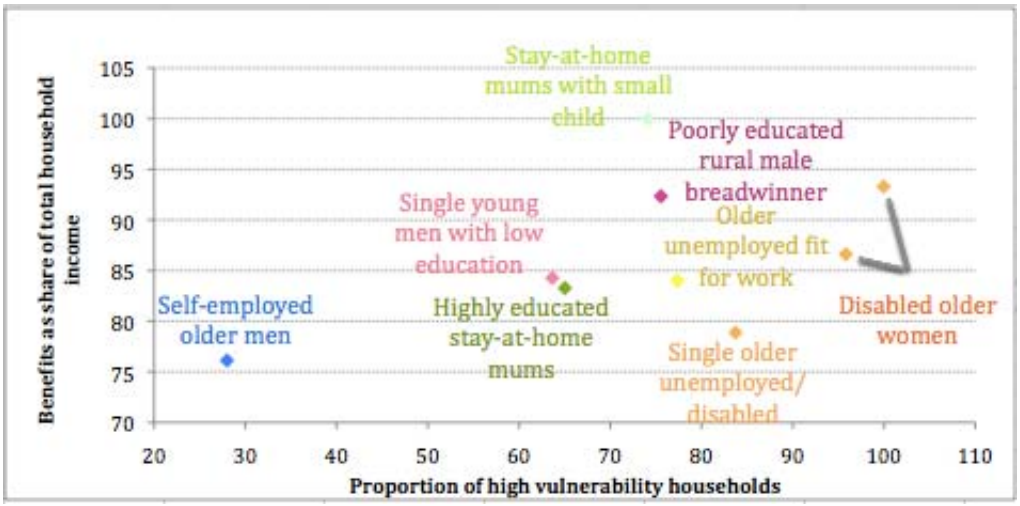
Notes: Intensity of vulnerability was calculated using the statistical model of persistent labor-market difficulties presented in Section B.2, Table 1. The estimated coefficients were used to calculate a probability of experiencing PLD. Those with a score in the bottom/top third of the whole working-age population (i.e., the 33 percent with the lowest/highest risk) were then classified as "low risk"/"high risk". FT denotes a full-time worker, OA represents old-age pension.

Source: World Bank staff calculations based on the Latvian version of EU-SILC, wave 2008-2011.

The proportion of income provided by social benefits however varies considerably across the nine groups. They are plotted on the vertical axis in Figure 6 and include family, housing and minimum-income support, as well as social insurance benefits such as unemployment or sickness/disability benefits and old-age pensions. Benefits have provided only a limited "top up" of family incomes,

accounting for at most one third of family incomes in all groups except the groups of older women chronically-ill and with low education (group 9) and old chronically-ill unemployed individuals (group 1) where transfers represent half and two-thirds of total income. Transfers remained quite low for the more educated (self-employed and 30-40 year-old women).

Figure 6: Targeting income support: Some groups have much greater need for support (Results for 2010)



Notes: Intensity of vulnerability was calculated using the statistical model of persistent labor-market difficulties presented in Section B.2, Table 1. The estimated coefficients were used to calculate a probability of experiencing PLD. Those with a score in the bottom/top third of the whole working-age population (i.e., the 33 percent with the lowest/highest risk) were then classified as "low risk"/"high risk". FT denotes a full-time worker, OA represents old-age pension.

Source: World Bank staff calculations based on the Latvian version of EU-SILC, waves 2008-2011 (with 2007 to 2010 as the reference year for incomes and activity calendars).

From a targeting perspective, it is desirable to direct support to those who need it most. To the extent that low benefit generosity results from a lack of neediness, it is simply a reflection of effective targeting. Indicators of high vulnerability[4] in Figure 6 suggest that higher risk households are those receiving a higher share of benefits in total family income. Indeed, groups with the largest shares of people with high risk of vulnerability (older, chronically-ill) appear to receive the most generous income support payments relative to their total income. The results are consistent with the interpretation that benefits

[4] Those with a score in the bottom/top third of the whole working-age population (i.e., the 33 percent with the lowest/highest risk) were then classified as "low risk"/"high risk".

are effective at reducing vulnerability among those who receive them (groups 7 and 9, and to a lesser extent 1), but that coverage and/or generosity can remain low for some of the groups who appear to be in particular need of income support (group 9 for instance).

Targeting issues also arise with activation measures, employment services, and other types of active labor market policies, such as training. Spending on active labor market policies *per unemployed person* typically falls very substantially during recessions (see companion paper World Bank, 2013b, and Immervoll and Scarpetta, 2012). There is a strong case for some automatic adjustment of active labor market spending as unemployment goes up in order to maintain PES service quality and the accessibility of labor-market programs. However, recessions leave policymakers with difficult choices about spending priorities. Even with a strong commitment to active labor-market policy, the aftermath of recessions will result in increased pressures to channel resources to those who need them most, or to groups where policy intervention is likely to have the greatest probability of success.

Those two criteria need not, and generally do not, provide the same answers about the desirable targeting mechanisms. This is illustrated in Figure 5 above, which shows on the horizontal and vertical axes the shares of people with predicted "low" and "high" risk of PLD in each group (see figure notes for a description of how these were calculated). This is useful because, although members of each group are all facing PLD and share many other characteristics, they are not identical. Some of them will face greater labor-market difficulties than others. It is therefore useful to ask how likely it is for each member to experience PLD given his or her characteristics.

If the objective is to focus activation policy efforts on those who are, in a sense, furthest from finding and holding a stable and adequately paid job, then policy should focus on those with a high risk of PLD. One can think of these group members as those with multiple or relatively major employment barriers. Using such a criterion, groups 1, 3, 7, and 9 (old and retired individuals with chronic illnesses) should be prioritized for activation measures.

A very different set of priorities would result if the objective is to focus efforts on groups where a significant numbers of individuals have relatively low risks of PLD. Group 6 would need to be prioritized in this case, i.e. the self-employed population. Such a strategy may be attractive as policies would have to "bridge" a smaller gap since people may already be relatively well equipped for finding a good-quality job. The probability of successful activation would therefore likely be higher. But at the same time, some of those "low risk" individuals may well have succeeded in overcoming their PLD even without active policy support.

In practice, it is useful to consider a wide range of information when deciding on policy design and targeting. The information in Figure 5 and Figure 6 should arguably be read in combination as an integrated policy approach would seek to tackle employment barriers and PLD risks, as well as indicators of economic hardship. The different perspective on group characteristics and employment barriers also highlights the need to link benefit design and activation policies. As part of an employment-oriented policy framework, benefits provide a principal instrument for linking unemployed people to employment services and active labor market programs. Low benefit coverage among those with persistent labor-market difficulties is not only a concern from an equality and poverty-reduction point of view. It also makes it harder to implement and deliver effective activation strategies and employment services, as those outside the scope of benefits tend to find accessing these services significantly more difficult.

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Annex 1

Table A.1: Variables used for Latent Class Analyses

Active Covariates	
AGE	Age group (15-19 y.o.)
	Age group (20-24 y.o.)
	Age group (25-29 y.o.)
	Age group (30-34 y.o.)
	Age group (35-39 y.o.)
	Age group (40-44 y.o.)
	Age group (45-49 y.o.)
	Age group (50-54 y.o.)
	Age group (55-59 y.o.)
	Age group (60-61 y.o.)
GENDER	Female
	Male
CIVIL	Consensual union
	Divorced
	Married
	Never married
	Separated
	Widowed
EDUCATION	Pre-primary
	Primary
	Lower Secondary
	(Upper Secondary
	Post-secondary
	1st stage tertiary
EXPERIENCE	None
	1 year
	2-3 years
	4-5 years
	6-10 years
	>10 years
ECONOMIC STATUS	Disabled/unfit for work
	Domestic tasks
	Other inactive
	Pupil, student, trainee
	Retirement
	Unemployed
	Working full-time
	Working part-time
SELF-EMPLOYED	Dummy
CHILDREN <6 y.o.	Dummy
NUMBER OF CHILDREN <16	None

Active Covariates	
y.o.	1 child
	2 children
	> 3 children
CHRONIC ILLNESS	Dummy
V1P	Persistent V1 = Not working at all
V2P	Persistent V2 = Low work intensity (working less than 50% of year)
V3P	Persistent V3 = Low earnings
V4P	Persistent V4 = Informal job (employer not paying Social Security contributions)
Partner V5XP	Partner persistent V1 or V2 or V3
Partner V4P	Partner persistent V4
Partner income	(Monthly, 0 if no partner)
GEO	Rural
	Urban
Inactive covariates	
LOW INTENSITY	No
	Yes
	N/A
HIGH INTENSITY	No
	Yes
	N/A
Mean labor income	
ARREARS	No
	Yes
	N/A
HEATING	No
	Yes
HARDSHIP	No
	Yes
OWN HOUSE	No
	Yes
ACTIVELY LOOK FOR JOB	No
	Yes
	N/A
SOCIAL BENEFITS (% total household income for everybody)	Family
	Social Exclusion
	Housing
	Unemployment
	Old-Age
	Sickness
	Disability
SOCIAL BENEFITS (% total household income for those getting transfer)	Family
	Social Exclusion
	Housing
	Unemployment
	Old-Age

Active Covariates	
SOCIAL BENEFITS (participation)	Sickness
	Disability
	Family
	Social Exclusion
	Housing
	Unemployment
	Old-Age
	Survivor
	Sickness

Annex 2

The following tables present detailed statistics on the clusters obtained with Latent Class Analysis. Two tables using longitudinal data are displayed: these show the results for the EU-SILC 2006-2009 and EU-SILC 2007-2010 (see Table A.2 and Table A.3, respectively).

Within each table, each column represents a different cluster or grouping. The first line (size of cluster) displays the relative size of each group with respect to the total population of vulnerable individuals. The first cluster is always the largest one, and then the rest of clusters are organized in decreasing order of size.

Within each table are displayed the different variables used to construct the groups: age categories, gender, civil status, educational attainment, experience, economic status, dummies for self-employment, children under 6 years old, number of children, chronic illness, type of vulnerability, partner's vulnerability status and income, and geographic indicator. Within each column (or cluster), the number associated with each occurrence, is the probability that one individual classified in that group belong to that category. For instance, and individual in the first cluster of Table A.2 has a probability equal to 19.2 percent to be 60 to 61 year-old.

The second half of each table displays descriptive statistics of some variables that were not used to create the groupings—i.e. *inactive covariates*—but that were considered to be important to understand the clusters in more detail. Thus, an individual belonging to the first cluster of Table A.2 will have an average annual income of €233 and a probability of having arrears of 31.6 percent.

The cells with bolded numbers in the table represent the category with the highest occurrence in each cluster/group (i.e. the one that helps distinguish one cluster/group from the other ones).

Table A.2: Panel 2006-2009

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8
	Size of Cluster (% to total PLD population)	16.5	15.8	15.5	14.1	13.9	11.5	8.7	4.0
ACTIVE COVARIATES									
AGE	Age group (15-19 y.o.)	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
	Age group (20-24 y.o.)	0.0	4.6	0.0	**39.6**	0.0	0.0	3.1	4.7
	Age group (25-29 y.o.)	0.0	**42.9**	0.0	**34.5**	0.0	0.0	14.4	0.0
	Age group (30-34 y.o.)	0.0	**24.5**	5.6	12.7	0.0	0.0	**25.3**	**32.9**
	Age group (35-39 y.o.)	4.6	16.3	10.2	9.4	5.0	2.3	**34.5**	**42.1**
	Age group (40-44 y.o.)	12.7	8.8	17.0	1.7	11.7	9.2	14.0	0.0
	Age group (45-49 y.o.)	21.7	1.1	11.0	0.0	20.9	16.5	8.5	10.6
	Age group (50-54 y.o.)	18.4	1.4	**18.4**	0.0	**25.0**	**22.7**	0.0	4.7
	Age group (55-59 y.o.)	**23.2**	0.4	**27.9**	0.0	**26.0**	**32.0**	0.0	0.3
	Age group (60-61 y.o.)	**19.2**	0.0	9.8	0.0	11.4	17.3	0.0	4.6
GENDER	Female	**55.6**	**94.8**	47.9	50.5	49.2	**67.9**	**62.9**	**89.3**
	Male	44.4	5.2	52.1	49.5	50.8	32.1	37.1	10.7
CIVIL	Consensual union	4.5	20.4	4.3	0.0	2.9	3.3	25.7	20.6
	Divorced	**34.7**	3.3	**29.3**	9.2	3.6	7.3	7.3	0.2
	Married	16.3	**76.2**	22.6	0.0	**89.4**	**86.3**	**64.8**	**79.1**
	Never married	**23.2**	0.0	16.6	**83.1**	0.0	0.0	0.0	0.1
	Separated	10.4	0.0	10.2	7.3	2.3	0.5	1.8	0.0
	Widowed	11.0	0.0	17.0	0.4	1.8	2.7	0.3	0.0
EDUCATION	Pre-primary	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0
	Primary	0.3	0.0	0.8	1.4	0.0	0.0	4.5	0.0
	Lower Secondary	28.1	14.7	21.4	**35.4**	10.9	19.6	**42.9**	0.1
	(Upper) Secondary	49.7	39.8	60.4	49.9	71.6	66.5	47.2	67.4
	Post-secondary	7.7	3.4	3.3	2.6	5.0	4.0	5.3	1.7
	1st stage tertiary	14.2	**42.1**	13.8	10.1	12.5	10.0	0.1	**30.9**

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8
EXPERIENCE	None	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1 year	0.0	3.3	0.0	29.3	0.5	0.0	4.1	9.0
	2-3 years	1.1	23.1	0.0	30.5	0.0	0.0	10.1	0.0
	4-5 years	3.9	22.6	0.1	19.2	0.0	1.9	9.3	13.7
	6-10 years	11.9	22.1	7.9	20.4	2.4	7.2	48.6	36.7
	>10 years	**83.1**	28.8	**91.9**	0.6	**97.0**	**90.9**	27.9	40.6
ECONOMIC STATUS	Disabled/unfit for work	**44.9**	0.0	7.8	2.4	9.1	**26.5**	1.5	7.4
	Domestic tasks	11.0	15.3	2.8	3.8	4.8	**29.7**	17.2	13.3
	Other inactive	4.7	11.3	2.5	7.4	0.6	5.0	8.5	0.0
	Pupil, student, trainee	0.0	0.7	0.0	2.4	0.0	0.0	0.0	3.4
	Retirement	11.9	0.0	5.9	0.0	14.3	12.9	0.0	1.7
	Unemployed	22.9	14.6	**32.8**	**40.8**	**35.5**	**23.3**	**38.3**	**51.7**
	Working full-time	2.0	**53.6**	**37.4**	**34.8**	**28.3**	1.1	**26.5**	22.5
	Working part-time	2.7	4.6	10.8	8.3	7.5	1.6	8.0	0.0
SELF-EMPLOYED	No	99.8	99.3	86.7	96.1	85.6	100.0	96.9	100.0
	Yes	0.2	0.8	**13.4**	3.9	**14.4**	0.0	3.2	0.0
CHILDREN <6 y.o.	No	85.2	1.0	86.3	69.8	93.1	88.0	40.5	77.5
	Yes	14.8	**99.0**	13.7	30.2	6.9	12.0	59.5	22.6
NUMBER OF CHILDREN <16 y.o.	None	80.8	0.5	65.5	49.6	76.5	75.2	16.3	43.0
	1 child	7.6	**61.8**	25.6	29.4	17.7	19.6	**27.1**	**33.0**
	2 children	10.4	26.4	5.8	18.7	3.8	1.9	**36.6**	**24.0**
	> 3 children	1.3	11.4	3.1	2.4	2.0	3.3	**20.0**	0.0
CHRONIC ILLNESS	No	15.1	80.8	49.0	67.3	43.3	31.1	62.8	72.1
	Yes	**84.9**	19.2	51.0	32.7	56.7	**69.0**	37.2	27.9
V1	No	0.5	71.1	83.0	74.3	83.3	3.6	57.8	39.2
	Yes	**99.5**	28.9	17.0	25.7	16.7	**96.5**	42.2	**60.8**
V2	No	98.3	36.1	33.9	37.2	29.1	99.8	49.0	75.6
	Yes	1.7	**64.0**	**66.1**	**62.8**	**70.9**	0.2	51.1	24.4
V3	No	99.2	66.4	34.6	62.9	41.3	99.5	61.9	92.8
	Yes	0.9	33.6	**65.4**	37.1	58.7	0.5	38.1	7.2

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8
PARTNER V5X	N/A	75.6	0.0	69.1	100.0	0.0	2.8	2.3	0.1
	No	0.0	96.6	0.1	0.0	81.6	70.7	54.7	99.8
	Yes	24.4	3.4	30.9	0.0	18.4	26.5	43.1	0.1
GEO	Urban	46.9	42.5	38.7	51.2	43.0	46.6	28.8	**90.2**
	Rural	**53.1**	**57.5**	**61.3**	48.8	**57.0**	53.4	**71.2**	9.8
INACTIVE COVARIATES		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOW INTENSITY	No	100.0	98.2	94.8	97.9	87.6	100.0	98.3	96.5
	Yes	0.0	1.8	5.0	1.3	12.4	0.1	1.7	3.5
	N/A	0.0	0.0	0.2	0.8	0.0	0.0	0.0	0.0
HIGH INTENSITY	No	0.0	20.4	22.5	19.1	26.0	1.0	9.3	17.4
	Yes	100.0	79.6	77.3	80.1	74.0	99.0	90.7	82.7
	N/A	0.0	0.0	0.2	0.8	0.0	0.0	0.0	0.0
Mean labor income		233	2497	1917	1943	2108	370	1456	3269
ARREARS	No	1.4	11.1	0.9	1.4	1.8	4.0	3.9	7.2
	Yes	31.6	30.3	38.2	33.6	15.5	24.2	43.9	24.5
	N/A	66.9	58.6	61.0	65.1	82.7	71.9	52.2	68.3
HEATING	No	32.7	13.2	33.9	23.1	14.0	14.1	27.9	5.2
	Yes	67.3	86.8	66.1	76.9	86.0	86.0	72.1	94.8
HARDSHIP	No	47.6	9.2	39.4	34.4	17.9	26.3	39.2	9.2
	Yes	52.4	90.8	60.6	65.6	82.1	73.7	60.8	90.9
OWN HOUSE	No	17.7	14.0	16.5	11.5	8.1	10.4	26.0	8.7
	Yes	82.4	86.0	83.5	88.5	91.9	89.6	74.0	91.3
ACTIVELY LOOK FOR JOB	No	0.2	2.4	1.3	0.0	0.0	0.5	0.1	0.0
	Yes	20.4	12.3	28.9	39.0	25.7	26.2	32.5	46.3
	N/A	79.4	85.3	69.9	61.0	74.2	73.3	67.5	53.7

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8
SOCIAL BENEFITS (participation)	Any benefit	90.3	99.3	83.3	84.7	84.0	90.4	96.4	78.5
	Family	21.2	**98.3**	37.6	48.6	41.0	37.1	**86.4**	61.7
	Social Exclusion	**13.6**	4.4	7.5	10.5	3.6	8.4	**21.8**	3.8
	Housing	**10.5**	0.1	2.7	3.0	1.3	1.3	1.3	0.0
	Unemployment	1.8	**18.3**	14.1	13.2	**20.2**	6.3	**16.9**	7.7
	Sickness	11.7	**16.6**	9.6	9.5	9.9	5.8	13.5	0.6
	Disability	**51.5**	0.6	14.2	9.0	13.9	34.0	6.6	5.2
	Old-age	6.9	0.0	7.0	0.0	7.4	9.0	0.0	1.6
	Survivor	1.4	0.0	5.6	2.0	0.0	0.4	0.2	0.0
SOCIAL BENEFITS (share of HH benefit in HH disposable income, all HH)	Any benefit	68.3	17.2	38.6	23.8	20.7	30.1	23.6	14.6
	Family	4.1	12.4	5.6	7.5	3.1	3.1	12.0	5.6
	Social Exclusion	0.7	0.1	1.1	0.3	0.2	1.2	0.8	0.1
	Housing	1.5	0.0	0.2	0.4	0.1	0.1	0.0	0.0
	Unemployment	0.8	1.4	3.6	2.2	3.8	3.5	2.1	0.2
	Sickness	0.7	0.8	1.3	1.4	3.3	1.4	1.3	0.7
	Disability	33.4	0.6	6.7	3.2	3.0	9.9	3.1	4.7
	Old-age	4.7	0.1	3.8	1.0	3.8	4.1	0.0	0.1
	Survivor	0.7	0.0	1.6	0.4	0.2	0.3	0.7	0.0
SOCIAL BENEFITS (share of HH benefit in HH disposable income, HH receiving the benefit)	Any benefit	74.0	17.3	46.2	28.0	24.6	33.2	24.5	18.6
	Family	19.1	12.6	14.9	15.5	7.7	8.4	13.9	9.1
	Social Exclusion	4.8	1.7	14.9	2.7	6.7	13.7	3.8	2.7
	Housing	13.8	1.0	7.7	14.4	4.4	9.9	1.2	4.6
	Unemployment	24.7	4.2	14.3	11.7	11.8	15.2	6.0	1.7
	Sickness	4.8	1.6	12.7	4.2	19.9	3.3	2.9	3.9
	Disability	56.7	13.8	32.9	19.8	14.5	22.9	11.9	12.1
	Old-age	57.0	12.5	42.2	35.5	34.2	19.6	12.3	5.9
	Survivor	51.1	21.5	25.9	12.0	6.4	34.7	21.5	23.6

Table A.3: Panel 2007-2010

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
Size of Cluster		21.6	17.5	13.6	11.3	11.2	8.8	6.4	6.1	3.6
ACTIVE COVARIATES										
AGE	Age group (15-19 y.o.)	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Age group (20-24 y.o.)	0.0	**31.6**	0.0	7.4	1.9	0.0	0.0	4.5	0.0
	Age group (25-29 y.o.)	0.0	**40.5**	0.0	**37.7**	12.3	2.6	0.0	8.3	0.0
	Age group (30-34 y.o.)	0.5	19.1	0.0	**31.1**	**28.1**	0.3	0.1	**21.8**	0.0
	Age group (35-39 y.o.)	9.4	6.5	7.3	17.4	**20.7**	11.6	1.0	**24.1**	0.1
	Age group (40-44 y.o.)	13.8	0.7	20.5	5.7	12.4	**30.1**	15.9	5.6	7.7
	Age group (45-49 y.o.)	18.1	0.0	17.4	0.7	8.5	**23.2**	12.8	7.7	18.9
	Age group (50-54 y.o.)	**24.1**	0.0	**22.0**	0.0	9.5	**24.1**	**27.4**	23.0	21.4
	Age group (55-59 y.o.)	**19.9**	0.0	**22.8**	0.1	6.6	6.3	**30.5**	2.7	**30.0**
	Age group (60-61 y.o.)	14.2	0.0	9.9	0.0	0.0	1.8	12.4	2.3	**22.0**
GENDER	Female	48.0	33.9	51.0	**94.2**	24.0	31.6	**68.5**	**79.5**	**61.3**
	Male	52.0	**66.1**	49.0	5.8	**76.0**	**68.4**	31.5	20.5	38.8
CIVIL	Consensual union	0.0	0.3	3.9	22.4	**34.5**	2.7	7.7	21.5	10.1
	Divorced	**36.8**	4.2	10.0	9.6	7.4	3.4	6.9	0.0	1.9
	Married	0.0	0.0	**82.2**	**63.7**	**57.3**	**90.9**	**83.5**	**72.4**	**81.8**
	Never married	**32.8**	**90.4**	0.3	0.6	0.0	0.0	0.0	1.1	0.0
	Separated	12.7	4.9	1.5	3.8	0.6	3.0	0.0	5.1	0.0
	Widowed	17.8	0.2	2.2	0.0	0.2	0.0	1.9	0.0	6.1
EDUCATION	Pre-primary	0.3	0.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0
	Primary	0.2	2.8	0.1	0.2	2.3	0.0	1.7	0.0	0.0
	Lower Secondary	19.0	**46.7**	8.4	18.5	**45.9**	1.4	8.0	7.2	**30.4**
	(Upper) Secondary	60.8	35.7	70.7	52.4	46.0	70.5	74.0	46.5	61.5
	Post-secondary	8.1	1.5	8.8	0.0	0.0	11.9	5.2	10.7	6.2
	1st stage tertiary	11.6	13.1	12.0	**28.9**	4.5	16.2	11.1	**35.7**	1.9

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
EXPERIENCE	None	0.0	6.8	0.0	2.9	0.2	0.0	0.0	0.1	0.0
	1 year	0.0	16.9	0.0	9.8	1.5	0.0	0.0	0.9	0.0
	2-3 years	0.2	30.2	0.0	23.4	7.1	0.0	0.4	5.0	0.1
	4-5 years	1.2	16.3	0.1	16.9	10.0	0.3	1.6	8.2	0.5
	6-10 years	12.0	17.0	3.7	23.4	27.2	6.4	13.5	25.9	7.8
	>10 years	**86.5**	12.9	**96.2**	23.7	**54.0**	**93.2**	**84.5**	**59.9**	**91.7**
ECONOMIC STATUS	Disabled/unfit for work	22.4	3.4	7.6	0.0	1.4	0.0	**30.9**	2.3	**23.3**
	Domestic tasks	7.5	2.4	2.0	25.2	1.8	0.0	**31.6**	**23.8**	**29.1**
	Other inactive	3.4	6.1	0.0	10.4	0.0	0.0	2.1	2.5	6.3
	Pupil, student,trainee	0.0	5.0	0.0	0.6	0.0	0.0	0.0	2.6	0.0
	Retirement	7.0	0.0	9.6	0.0	0.0	0.0	10.4	1.9	18.9
	Unemployed	**33.6**	**34.9**	**42.3**	14.6	**43.3**	2.2	20.5	**22.1**	**21.4**
	Working full-time	21.7	**42.9**	28.0	**46.2**	**48.6**	**93.8**	4.3	**35.0**	1.1
	Working part-time	4.4	5.3	10.6	3.0	4.9	4.0	0.2	9.7	0.0
SELF-EMPLOYED	No	89.8	93.4	98.2	100.0	91.9	54.9	100.0	87.5	100.0
	Yes	10.2	6.6	1.8	0.0	8.1	**45.1**	0.0	12.5	0.0
CHILDREN <6 y.o.	No	93.6	81.8	98.1	6.0	47.1	92.1	93.7	65.7	60.2
	Yes	6.4	18.2	1.9	**94.0**	52.9	8.0	6.3	34.3	39.8
NUMBER OF CHILDREN <16 y.o.	None	**84.4**	**67.6**	**83.3**	0.1	16.3	**55.7**	**79.0**	43.6	**52.6**
	1 child	11.4	22.9	13.6	**49.4**	**34.9**	31.0	15.9	**28.2**	38.0
	2 children	3.2	5.4	3.1	**33.4**	**30.6**	13.3	1.4	**22.0**	3.1
	> 3 children	1.0	4.0	0.1	17.2	18.2	0.0	3.8	6.3	6.3
CHRONIC ILLNESS	No	42.8	81.2	53.0	92.2	60.2	81.6	36.8	81.2	16.7
	Yes	**57.2**	18.8	47.0	7.8	39.8	18.4	**63.2**	18.8	**83.3**
V1	No	55.2	75.5	89.4	58.9	80.5	98.7	0.6	72.8	1.4
	Yes	44.8	24.5	10.6	41.1	19.5	1.3	**99.4**	27.2	**98.6**
V2	No	75.0	70.8	48.0	53.4	67.5	99.3	100.0	58.1	99.9
	Yes	25.0	29.2	**52.0**	46.6	32.5	0.7	0.0	41.9	0.1
V3	No	63.2	59.9	38.4	61.6	54.9	82.3	100.0	52.5	99.4
	Yes	36.9	40.1	**61.6**	38.4	45.1	17.7	0.0	47.5	0.6
V4	No	74.8	64.5	88.1	98.4	60.0	1.5	97.7	67.6	98.0
	Yes	25.2	35.5	11.9	1.6	40.0	**98.5**	2.3	32.4	2.0

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
PARTNER V5X	N/A	**98.4**	**100.0**	2.4	7.9	0.1	1.8	2.6	2.7	0.1
	No	0.0	0.0	61.3	81.1	26.5	72.7	89.0	96.9	0.1
	Yes	1.6	0.0	36.3	11.0	**73.5**	25.5	8.4	0.4	**99.8**
GEO	Urban	46.5	40.5	47.8	43.7	29.2	53.5	50.3	**55.9**	41.5
	Rural	53.5	**59.5**	52.2	**56.3**	**70.8**	46.5	49.7	44.1	**58.5**
INACTIVE COVARIATES		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOW INTENSITY	No	95.3	93.0	92.2	97.3	97.7	78.7	99.9	86.2	100.0
	Yes	4.7	6.5	7.2	1.8	2.2	21.3	0.1	13.6	0.0
	N/A	0.0	0.5	0.6	0.8	0.1	0.0	0.0	0.2	0.0
HIGH INTENSITY	No	16.3	35.9	22.1	25.0	24.3	72.0	4.2	34.8	0.0
	Yes	83.7	63.7	77.4	74.2	75.6	28.0	95.8	65.0	100.0
	N/A	0.0	0.5	0.6	0.8	0.1	0.0	0.0	0.2	0.0
Mean labor income		1271.1	1600.4	1901.1	1414.6	2063.9	4608.6	361.3	2100.0	167.1
ARREARS	No	0.3	1.2	1.5	4.9	2.0	0.9	0.4	7.7	0.7
	Yes	30.9	32.0	30.0	43.0	46.6	25.2	23.0	19.0	44.2
	N/A	68.8	66.8	68.6	52.2	51.5	73.9	76.5	73.3	55.2
HEATING	No	35.6	23.9	19.3	13.7	25.4	13.6	14.2	7.6	24.9
	Yes	64.4	76.1	80.7	86.3	74.6	86.4	85.8	92.5	75.1
HARDSHIP	No	44.7	28.0	26.6	18.1	29.7	10.1	23.5	6.7	40.8
	Yes	55.3	72.0	73.4	81.9	70.3	89.9	76.5	93.3	59.2
OWN HOUSE	No	21.5	14.6	10.8	17.9	20.5	4.2	4.8	11.1	20.6
	Yes	78.6	85.4	89.3	82.1	79.5	95.8	95.3	88.9	79.4
ACTIVELY LOOK FOR JOB	No	1.3	0.5	0.3	1.5	2.0	0.0	3.9	0.3	0.0
	Yes	28.5	34.4	34.4	14.4	34.3	4.5	15.7	23.3	23.3
	N/A	70.2	65.0	65.3	84.1	63.7	95.6	80.5	76.4	76.7

		Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
SOCIAL BENEFITS (participation)	Any benefit	78.9	84.3	84.0	100.0	92.3	76.1	86.6	83.3	93.3
	Family	19.3	37.5	32.0	**99.3**	**84.7**	58.3	37.2	62.1	55.2
	Social Exclusion	**9.0**	6.8	5.6	**12.6**	**15.6**	2.9	7.5	7.0	2.7
	Housing	**8.8**	**7.5**	4.3	6.5	**9.6**	0.7	1.8	0.3	4.8
	Unemployment	16.1	13.3	**26.4**	**24.0**	**23.0**	1.0	3.3	17.4	6.0
	Sickness	8.8	9.9	13.1	**19.8**	3.5	5.8	0.6	14.1	2.6
	Disability	**27.2**	8.2	14.3	0.2	10.3	1.5	**32.6**	2.2	**31.0**
	Old-age	**8.5**	0.2	**8.0**	0.0	0.3	1.7	6.9	1.9	**9.4**
	Survivor	3.8	2.5	0.5	0.8	0.3	0.0	0.1	0.4	1.4
SOCIAL BENEFITS (share of HH benefit in HH disposable income, all HH)	Any benefit	55.5	29.1	29.6	27.7	36.6	15.1	28.8	13.6	66.6
	Family	2.4	4.1	2.5	13.9	13.7	4.6	3.1	6.0	11.9
	Social Exclusion	1.5	0.8	0.6	1.2	2.4	0.5	0.7	0.1	1.0
	Housing	0.9	0.6	0.4	0.6	0.6	0.2	0.2	0.1	0.3
	Unemployment	5.6	5.1	6.0	6.7	9.0	1.4	2.8	3.0	8.7
	Sickness	1.4	2.0	2.1	2.0	0.7	0.6	1.4	1.4	0.7
	Disability	17.5	5.7	6.0	1.0	5.1	1.2	12.0	0.4	23.8
	Old-age	6.0	1.5	3.1	0.3	0.2	0.2	4.0	0.6	6.4
	Survivor	1.8	0.9	0.2	0.2	0.9	0.2	0.1	0.1	0.7
SOCIAL BENEFITS (share of HH benefit in HH disposable income, HH receiving the benefit)	Any benefit	67.6	34.5	35.2	27.7	39.7	19.9	33.2	16.3	71.4
	Family	11.9	10.8	7.7	14.0	16.2	7.8	8.4	9.7	21.6
	Social Exclusion	15.6	11.9	10.4	9.7	15.1	18.8	8.8	1.9	37.4
	Housing	9.7	8.4	9.3	8.8	6.6	26.1	12.5	20.2	6.5
	Unemployment	28.5	9.3	12.9	12.6	14.4	14.1	17.6	6.7	22.6
	Sickness	13.8	3.8	8.3	3.3	4.4	8.7	8.7	2.7	1.8
	Disability	57.5	27.0	20.4	19.8	26.0	-3.2	24.7	6.6	46.2
	Old-age	57.1	22.9	35.0	20.2	21.3	5.4	34.0	8.2	30.5
	Survivor	33.3	21.5	18.9	13.1	9.3	14.1	53.1	9.0	37.4

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Scientific research: Latvia: "Who is Unemployed, Inactive or Needy? Assessing Post-Crisis Policy Options"

EXPENDITURE AND PERFORMANCE BENCHMARKING COUNTRY LEVEL

Victoria Strokova and Tomas Damerau

June 2013

INVESTING IN YOUR FUTURE!

European Social Fund Activity

"Complex support measures" No. 1DP//1.4.1.1.1./09/IPIA/NVA/001

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Expenditure and Performance of Welfare Benefits and Employment Programs in Latvia

Victoria Strokova and Tomas Damerau

Executive summary

Social protection aims at supporting the poor and vulnerable, as well as helping individuals, families and communities manage risks. Social protection consists of social insurance and social assistance programs and labor market policies. Social insurance programs are financed by contributions and aim to help individuals withstand income shocks, as well as secure livelihood in old age, in case of disability or loss of parents. Main **social insurance programs** are pensions.[1] **Social assistance or welfare programs**[2] are non-contributory benefits (or services) targeted at the poor, as well as families with children, disabled and other categories of the population who may need income support or other assistance.[3] Finally, **labor market programs** include passive income support to the unemployed (unemployment insurance or assistance) and active labor market programs (ALMPs). This note primarily focuses on non-contributory social assistance benefits and labor market policies.

This note provides a **review of expenditure on social assistance and employment programs** in Latvia in comparison with other European Union (EU) countries. It also **benchmarks performance of non-contributory cash transfers against the objective of poverty alleviation**, i.e. it looks at coverage, targeting accuracy and benefit adequacy of social assistance transfers targeting the poor.

The "poor" in this note are defined as those in the poorest quintile (poorest 20 percent) based on equivalized disposable income before all social assistance transfers. While this is different from the definition of the poor (those below the at-risk-of-poverty threshold) used in the European Union[4], in practice in Latvia there is a significant overlap between these two groups: 95 percent of those "at-risk-of-poverty" belong to the poorest quintile.

[1] Other social insurance programs include maternity and parental leave, insurance against work injury and sick leave, as well as unemployment insurance. The latter in this note is considered under the labor market policies.

[2] See Box 1 for information on main types of social assistance programs in EU countries. See Table 1 for an overview of main social protection programs in Latvia and classification used in this note.

[3] In this note, social assistance is defined as all non-contributory programs (in cash or in kind), whether they are means-tested or not.

[4] In the EU the poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers.

Spending on social protection in Latvia remains relatively low and mainly driven by social insurance programs

Latvia's spending on social protection remains relatively low compared to other EU countries, despite an increase in real terms of almost 30 percent between 2007 and 2009. In 2009[5], Latvia spent about 13 percent of GDP on social protection, in contrast to the EU average[6] of about 21 percent. Latvia's spending on social protection is more in line with countries of its income level, such as Bulgaria or Romania.

The increase in social protection spending between 2007 and 2009 was primarily driven by social insurance benefits. Although automatic stabilizers, such as the unemployment benefits or means-tested benefits, have expanded after policy adjustments were taken to allow for them to respond, the pre-crisis growth in old-age pension expenditure have largely contributed to mounting outlays on social protection between 2007 and 2009. Means-tested programs and unemployment contributed only marginally to rising expenditure.

Social assistance spending is particularly low and is allocated mostly to universal programs, not targeted at the poor

Latvia's expenditure on social assistance is low compared to other EU countries. In Latvia only about one fifth of total social protection spending is allocated to non-contributory social assistance programs.[7] In 2009, 2.3 percent of GDP was spent on non-contributory social benefits and services. Among EU countries, only Estonia and Poland spent less (1.9 and 1.6 percent of GDP, respectively) on social assistance.

Social assistance is mostly delivered in the form of cash transfers and is not targeted on the basis of need. Out of overall social assistance spending, about two-thirds are allocated to cash transfer programs, mostly to universal family and child allowances. Taking into account transfers in cash, in-kind benefits and services, poverty-targeted programs represent only 10 percent of the total spending on social assistance in 2009. This is relatively low, especially when compared to the EU average of 45 percent.

Despite recent adjustments, spending on universal social assistance programs continues to dwarf expenditures on poverty-targeted programs. While in recent years real spending on categorical programs, such as family and children allowances, has decreased, overall spending on

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[5] The time frame for the cross-country analysis in this note is 2008-2009, since ESSPROS data used for benchmarking was only available until 2009 at the time of writing. Subsequently, 2010 data was released, but it remains provisory for many countries. Post 2009 data based on administrative sources from the Ministry of Welfare was used to complement the analysis of Latvia's social protection spending.

[6] A simple average over EU27 countries comprises the EU average.

[7] European system of integrated social protection statistics (ESSPROS) data was used. To make a distinction between contributory and non-contributor transfers, the figures presented in this note do not follow the standard functional classification used in ESSPROS. Note that expenditures on health are not included. As a result, municipal means-tested benefit for the healthcare (paid in cash or in-kind) is also excluded from the totals, but total spending on this program (3.69 million LVL in 2009) is not likely to impact benchmarking results. See Annex 3 for additional information on methodology, limitations and main results obtained. See also Tables 10-12 in Annex 5 for some of the key results.

such programs remains significantly larger than spending on poverty-targeted programs. Even after its recent expansion, expenditure on the Guaranteed Minimum Income (GMI) program, which is the main poverty-targeted program in the country, remains very moderate compared to other EU countries (0.16 percent of GDP in 2011).

Social assistance programs cover too few of the poor, while many of the rich benefit from universal programs, leading to high leakage to the non-poor

Coverage of the poor by social assistance is not very high while many of those in the upper quintiles receive social assistance. Approximately 57 percent of the poor receive at least one of the social assistance transfers, representing a relatively low coverage when compared to most other EU countries. At the same time, the share of the rich covered by social assistance in Latvia is the fourth highest in the EU with about 50 percent of those in the richest quintile receiving some social assistance benefits.[8]

Consequently, the distribution of social assistance benefits in Latvia is strikingly regressive. The share of all social assistance benefits going to the poorest quintile, or targeting accuracy, is under 20 percent in 2009, while the share of benefits going to the richest quintile is almost 27.5 percent. This is strikingly different from a typical progressive distribution of social assistance benefits in other EU countries, where, on average, the poorest quintile received more than 40 percent while the richest - under 10 percent. This is largely due to the universal family and child benefits, which are the least targeted among all social assistance benefits in Latvia.

Targeting of the GMI program is very good, but coverage and adequacy are not sufficient to have a meaningful impact on poverty and inequality

The targeting of the GMI program to the poor is impressive, but coverage remains low. The GMI program has virtually no leakage to the upper quintiles with 91.3 percent of the benefits accruing to the poorest quintile and further 7.1 percent received by those in the second quintile.[9] Despite recent increases in coverage, the GMI program still covers very few of the poor. Only 13.7 percent of the poor received the GMI program in 2010.

Benefits aimed at preventing social exclusion in Latvia and the GMI program, in particular, do not appear to provide adequate income support. These benefits appear to contribute very little to incomes of those in the poorest quintile (less than 10 percent). The benefit levels leave most beneficiaries (75 percent in 2010) at risk of poverty. At the same time, targeting of the non-GMI social exclusion benefits could be potentially strengthened, as currently about 40 percent of spending on these programs goes to the top three quintiles.[10]

[8] Staff calculations based on 2009 EU-SILC data

[9] Staff calculations based on 2011 Latvia SILC data.

[10] These benefits include funeral allowances, lump-sum municipal benefit in emergency situation, benefit for politically repressed, compensation paid to persons engaged in work in the galleys and other municipal benefits (for education and upbringing, partly paid meals, kindergarten fees, etc.).

Means-tested programs are more efficient than universal programs at transferring resources to the poor, but their impact on poverty and inequality[11] in Latvia is limited due to low coverage and low generosity. Compared to non means-tested programs, the GMI is much more efficient in delivering assistance to the poor. Most of the spending on the GMI program goes to the poorest quintile. However, due to low generosity and low coverage, the impact of the GMI program on poverty is limited and the poor continue to rely on additional support they receive from non means-tested programs.

Recent reforms to the GMI program represent a significant reversal of gains achieved during and following the crisis

Recent changes to the GMI program (benefit cuts, in particular) further undermine the coverage of the program and adequacy of the minimum income support. Full decentralization of financing back to the municipalities assuming full financial responsibility for both the housing and GMI benefits jeopardizes the role these benefits can play as a safety net in future crisis and could exacerbate inequity.

Latvia leveraged labor market programs during the crisis extending unemployment benefit duration and introducing an emergency public works program

In response to the crisis Latvia spent about 1.3 percent of GDP on labor market programs (LMP) in 2009-2010. This represents a considerable increase compared to the approximately 0.5 percent of GDP it spent on these programs between 2003 and 2008. In 2010, slightly more than half was allocated to passive programs (unemployment benefits) [12]. During the crisis, Latvia extended the duration of unemployment benefits to 9 months for all qualifying unemployed. Additionally, Latvia introduced an emergency public works program (Workplaces with Stipends, WWS) to provide a safety net to those unemployed who did not qualify for or run out of their benefits.

Following the crisis, labor market spending is being winded down despite continued high levels of unemployment

Spending on passive labor market programs had increased significantly in Latvia during 2009-2010, but fell back to pre-crisis levels in 2011, despite persistently high unemployment. In 2009, spending on passive labor market programs (unemployment benefits) peaked and reached 1 percent of GDP in Latvia compared to just 0.3 percent of GDP, on average, during pre-crisis years. Nonetheless, spending on unemployment benefits dropped significantly from 2010 (0.7 percent of GDP) to 2011 (0.32 percent of GDP), reaching levels slightly above the pre-crisis period. Spending dropped more rapidly than the number of unemployed, which remains higher than before the crisis.

[11] Latvia remains the country with highest inequality among all EU countries.

[12] From July 1, 2009 duration of unemployment benefit (UB) was increased on a temporary basis (until December 31, 2011) to 9 months, regardless of the length of contribution history. However, since January 1, 2013 this change was made permanent.

This indicates that many unemployed lost their benefits before they were able to find new (permanent) jobs, increasing pressures on other social benefits or program, such as the GMI program.

Latvia continues to spend relatively little on active programs for the unemployed compared to other EU countries

Latvia's spending on ALMPs, including PES, has remained below the EU average even during the crisis. In 2011, spending on ALMPs went down to 0.33 percent of GDP from 0.51 percent in 2010. This further increased the gap between what Latvia spends on active programs per unemployed person (as a share of GDP per capita) and what EU12[13] or, especially EU15[14] countries spend, on average. Spending on Public Employment Services (PES) is only about 3 percent of the total LMP expenditure, which represents only 0.04 percent of Latvia's GDP. This is lower than spending on PES in neighboring countries despite them having overall somewhat more favorable labor market conditions (Estonia spent 0.09 percent of GDP and Lithuania 0.08 percent of GDP in 2010).

Composition of ALMP spending shifted toward direct job creation during the crisis, while less effective programs were replaces with new targeted measures

The composition of spending on active measures had shifted toward direct job creation and training programs in the crisis. Similarly to other EU countries, training and employment incentives have been predominantly used in Latvia. But in 2009, with the introduction of the new public works program, 40 percent of active labor market programs went to direct job creation, while the rest was split between training (about 50 percent) and employment incentives (10 percent). According to the Eurostat's Labor Market Policy database, Latvia spends very little on start-up incentives and there are currently no programs for rehabilitation or supported employment specifically aimed at integration of the disabled into the labor market reported in the.[15] However, a number of start-up programs administered by the Ministry of Economics as well as a range of general rehabilitation programs and wage subsidies for the disabled are not captured in this data source.

Less effective programs are often phased out rapidly resulting in a significant turnover of programs over time. Latvia's active labor market programs have changed greatly over time, with less effective programs being discontinued and replaces with new ones. As a result, spending on

[13] The EU12 is comprised of the following 12 countries: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, and Slovenia.

[14] The EU15 is comprised of the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

[15] While there are no programs for rehabilitation and supported employment targeted to the disabled in the Eurostat's LMP database, social protection programs aimed at the disabled are included in the analysis of European system of integrated social protection statistics (ESSPROS) data.

labor market measures looks fragmented across various programs. This is especially the case in the employment incentives category, in which several programs lasted only for a few years. Between 2004 and 2007, employment incentives were predominantly characterized by subsidies and work practices for targeted unemployed. After 2007 some of these programs were replaced by training at the workplace and other initiatives.

As Latvia's public finances improve, there is an opportunity to provide more meaningful protection to the poor and vulnerable while further improving efficiency of spending

Despite eased fiscal pressures, lessons from the crisis caution against expanding non-targeted programs. Prior and during the crisis, not easily reversible expansion of social protection programs (such as pensions) put significant constrains on the public budget. Policy adjustments were needed to allow automatic stabilizers to respond, and as a result, their operation was significantly delayed. Going forward, it would be important to increase efficiency as well as equity of social protection spending as policy priorities to be better prepared for future crises.

While spending on social assistance is low, there is room to improve efficiency and equity by increasing coverage of the poor and adequacy of provided income support through means-tested programs. While the share of spending on means-tested programs has increased in recent years due to the expansion in the GMI program and some measures taken to curtail family benefits expenditure, there still is room to reallocate spending away from programs that are not targeted to the poor. Given low coverage of the poor and low generosity, some, if not all, of the savings would need to be channeled to increase coverage and adequacy of the minimum income support. Cutting non means-tested programs across the board could hurt the poor who rely on these transfers, so instead they could be means-tested with a relatively generous cut-off that includes those in need, but exclude the rich who do not need these transfers.

In order for the GMI program to provide adequate and equitable support to the needy in Latvia, central government co-financing is key. Experience in the last crisis has shown that a safety net relying on local financing cannot respond adequately in the face of a serious economic crisis. Furthermore, even in good times, local financing of last-resort social assistance is likely to lead to significant inequity in treatment of the poor and needy across municipalities due to different revenue capacity and more demands on budgets in poorer municipalities.

The experience with the public works program during in the crisis could guide future policy making in the area of labor market policy. Continued high unemployment despite general economic recovery underway calls for a better evaluation of effectiveness of labor market policies and developing appropriate programs and approaches based on constrains faced by the unemployed. An evaluation has shown that the WWS program, introduced in response to the crisis, provided temporary employment opportunities and helped the unemployed mitigate the impact of the crisis. Further monitoring and evaluating of labor market policies will contribute to developing targeted measures and programs to faciliate employment of the unemployed.

1. Introduction

After being hit hard by the global financial crisis, Latvia's economy and public finances show healthy signs of recovery, but the focus on fiscal restraint remains. Following a drastic drop in GDP in 2008-2010, Latvia's real GDP grew at a rate of 5.5 percent annually in 2011 and 2012. Latvia's budget deficits have also improved significantly. While the crisis seems to be over in Latvia, there is a continued focus on moderating spending pressures given that the Government's objective to solidify past fiscal gains and ensure the budget position is consistent with the Maastricht deficit criterion and the Stability and Growth Pact. In this context, this note provides a review of expenditure on social assistance and employment programs in Latvia in comparison with other EU countries as well as benchmarks performance of non-contributory cash transfers against the objective of poverty alleviation.

To provide a comprehensive picture, the note discusses social assistance in the framework of the overall social protection system, but the focus is on non-contributory social benefits and employment programs.[16] Social assistance is defined in this note as those government programs eligibility to which is not based on previously made contributions (non-contributory). Social assistance can be delivered in cash or in-kind, including in the form of social services. Often times it is targeted in some way to the poor (means-testing, proxy-means-testing, etc) or those who may be vulnerable to poverty and social exclusion (disabled, families with children, etc.). In many EU countries, the latter programs are not subject to a means-test (for more information on social assistance programs in EU countries see Box 1). Main labor market programs include unemployment benefits and active labor market programs (ALMPs). Key social protection programs in Latvia and basic classification used in this note are presented in Table 2.

Social assistance and employment programs are an integral part of social protection and form an important pillar of active inclusion strategies. The European Platform against Poverty and Social Exclusion states the following objective: "Benefits of growth are widely shared and that people experiencing poverty and social exclusion are enabled to live in dignity and take an active part in society[17]." To achieve active inclusion, the EU promotes three pillars of engagement: (1) Adequate income support, (2) Inclusive labor markets, and (3) Access to quality services. Social assistance is one of the main instruments by which EU countries can ensure adequate income support to the poor and vulnerable and fight social exclusion[18] and employment programs help promote inclusive labor markets. These pillars of engagement are in line with the World Bank's

[16] Other policies and instruments, administered through the tax system, such as tax credits, and other types of in-work benefits which exist to promote employment and alleviate in-work poverty will be discussed in a note on "Financial Incentives of the Tax and Benefit System in Latvia." Furthermore, while the note discusses expenditure on employment programs, such as unemployment benefits and active labor market programs (ALMPs), their performance in terms of efficiency and effectiveness will be analyzed in a separate note on "An Evaluation of ALMPs in Latvia".

[17] European Commission (2010).

[18] Albeit social assistance is not covered in the EU's social *acquis communautaire* (the social dimensions of integration), member states coordinate their social policies through the Open Method of Coordination and National Action Plans for Social Inclusion.

strategy of ending poverty and promoting shared prosperity and the World Bank's Social Protection and Labor main overarching goals of improving resilience, equity, and opportunity (World Bank, 2012).

The "poor" in this note are defined as those in the poorest quintile (poorest 20 percent) based on equivalized disposable income before all social assistance transfers. While this is different from the definition of the poor (those below the at-risk-of-poverty threshold) used in the European Union[19], in practice in Latvia there is a significant overlap between these two groups: 95 percent of those below the at-risk-of-poverty threshold belong to the poorest quintile.

The note uses several data sources allowing international comparisons of expenditure and performance and complements it with national data sources, where possible. Social protection expenditure data is mainly derived from the European system of integrated social protection statistics (ESSPROS) which allows to benchmark expenditure using comparable data for all EU countries.[20] To the extent possible, expenditure data from Latvian national sources is used to complement the analysis.[21] Comparable indicators of performance are produced based on the analysis of the 2009 European Union Statistics on Income and Living Conditions (EU-SILC) data using a standardized methodology. Disaggregated data from the 2009-2011 Latvia SILC is used to analyze performance of social assistance at a program level.

Social assistance can be delivered in cash and in-kind[22], but the focus of this note is on performance of cash transfers. In particular, the note focuses on: how well do social assistance cash transfers reach the poor; how effective are they in targeting those in need; how adequate is the provided income support; and how can performance be improved in light of the need to tighten public finances.

[19] In the EU the poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers.

[20] ESSPROS data is complemented with more detailed data on labor market program expenditure from Eurostat's Labor Market Policy database. While ESSPROS data has significant advantages in terms of coverage and comparability of the data, the drawback is that it is available with a significant lag. Hence, most comparisons are made using 2009 data. Where possible, more recent data is used.

[21] In particular, administrative data kindly provided by the Ministry of Welfare (MoW) was used for some of the analysis.

[22] During the last decade, the share of social assistance spending delivered in cash remained relatively stable between 54 and 61 percent in Latvia (see Figure 2).

Box 1: Main types of social assistance in the EU countries

EU countries provide a wide range of cash transfer programs including:

- **Last-resort social assistance programs (LRSA)** whose main objective is to alleviate poverty and provide income support to the poor and vulnerable,
- **Family and child benefits** that aim to protect families with children, incomes of mothers and parents more broadly and promote the development of human capital and protect jobs,
- **Social pensions** that protect the old who may not be eligible for contributory pensions, or who have insufficient income,
- **Heating and housing allowances** that subsidize dwelling expenses, and
- **Disability allowances** that provide financial support to the disabled who are not eligible for contributory disability benefits and / or pensions.

Additionally, EU countries also provide a variety of social services and in-kind assistance, such as **accommodation** for retired and disabled people, shelter and board provided to children and families and destitute or vulnerable people; **assistance in carrying out daily tasks** to old and disabled people; **rehabilitation** for the disabled; **home help** to children and/or to those who care for them; **child day care**; **rehabilitation of alcohol and drug abusers** and other miscellaneous services and goods provided to retired and disabled people to enable them to participate in leisure and cultural activities, or to travel and/or to participate in community life; also provided to families, young people or children.

Source: European Commission (2008), World Bank staff.

Table 1: Overview of main social protection programs in Latvia

Social Protection Category	Programs	Eligibility	Responsible agency	Cost (as % of GDP, 2011)
Social Insurance (contributory)	**Pensions** (Old age, survivors' and disability pensions, special pensions, funeral allowances, other compensations)	Those with sufficient history of social contributions and qualifying other criteria (pension age, disability status, maternity, etc.)	Ministry of Welfare (State Social Insurance Agency)	8.45%
	Disability and Sickness (Compensation for the loss of capacity for work, Sickness benefit)			0.47%
	Family benefits (Maternity benefit, Paternity benefit, Parent's benefit)			0.39%
Labor Market (contributory and non-contributory)	**Active Labor Market Policies** (incl. Public Employment Services)	Registered unemployed, employers	Ministry of Welfare (State Employment Agency of Latvia)	0.37%
	Passive Labor Market Policies (Unemployment benefit)	Registered unemployed with a sufficient history of social contributions		0.32%
Social Assistance/ Welfare benefits (non-contributory)	**Last-resort Social Assistance** (Guaranteed Minimum Income (GMI) program, Benefit in emergency situations)	People qualifying the means-tested eligibility threshold	Municipalities	0.17%
	Housing & utility benefits (Housing benefit)	People qualifying the means-tested eligibility threshold	Municipalities	0.14%
	Social Pension (State social maintenance benefit)	Those with insufficient history of social contributions, but otherwise qualifying for pension (old-age, disability, survivor)	Ministry of Welfare	0.09%
	Family benefits (Family State Benefit, Child-care benefit, Child-birth benefit)	All families with children	Ministry of Welfare (State Social Insurance Agency)	0.26%
	Disability benefits (Disabled child care benefit, Disabled person care benefit, Supplement to the family state benefit for a disabled child, State social benefit for transport compensation to the disabled persons with mobility problems)	Disabled children and adults		0.20%
	Other social assistance benefits (Benefits for meals and food, Funeral allowance in the case of death of the state social security benefit recipient, Health care benefits, Transport benefits, Other municipal benefits)	People qualifying the means-tested eligibility threshold or other eligibility criteria set by municipalities	Municipalities	*0.09%

Note: * Municipal spending based on 2009 figures. As these figures are based on administrative data received from the Ministry of Welfare, they are not strictly compared to findings based on the ESSPROS database. *Source*: ECA Social Protection Expenditure and Evaluation Database 2013, based on administrative data provided by the Ministry of Welfare.

2. How much is spent on social assistance in Latvia and other EU countries?

Latvia's spending on social protection remains relatively low compared to other EU countries, despite a significant increase in spending between 2007 and 2009. In 2009[23], Latvia spent about 13 percent of GDP on social protection, in contrast to the EU average of about 21 percent.[24] This, however, represent a significant increase, as social protection spending grew by almost 30 percent between 2007 and 2009 in real terms. Latvia's spending on social protection is more in line with countries of its income level, such as Bulgaria or Romania (Figure 1).

In most EU countries the share of social assistance in total social protection expenditure is not very high, though it varies across countries. Spending on social assistance as a share of social protection expenditures varies across the EU. For example, Poland allocates only 10 percent of social protection outlays to social assistance, while Denmark and Cyprus spend more than 40 percent of social protection budgets on social assistance. On average, however, the majority of public expenditure on social protection is channeled through social insurance programs, which include old age and disability pensions. In Latvia, only about a fifth of total social protection spending goes to social assistance (Figure 1).

The level of social assistance spending in Latvia is one of the lowest in the EU. Spending on social assistance varies from 1.6 percent of GDP in Poland to 10 percent of GDP in Denmark (Figure 2). Latvia is one of the EU countries with the lowest spending on social assistance (2.3 percent of its GDP). Only Estonia and Poland spend less (1.9 and 1.6 percent of GDP, respectively).

Within social assistance, the share spent on cash benefits versus benefits in-kind differs across EU countries. Nordic countries deliver a large share of social assistance through social services (*benefits in kind*) compared to the new EU member states, such as Poland and Estonia, where the majority of social assistance is provided in form of cash transfers. During the last decade in Latvia more than half (approximately 60 percent) of social assistance benefits were delivered as cash transfers (Figure 2).

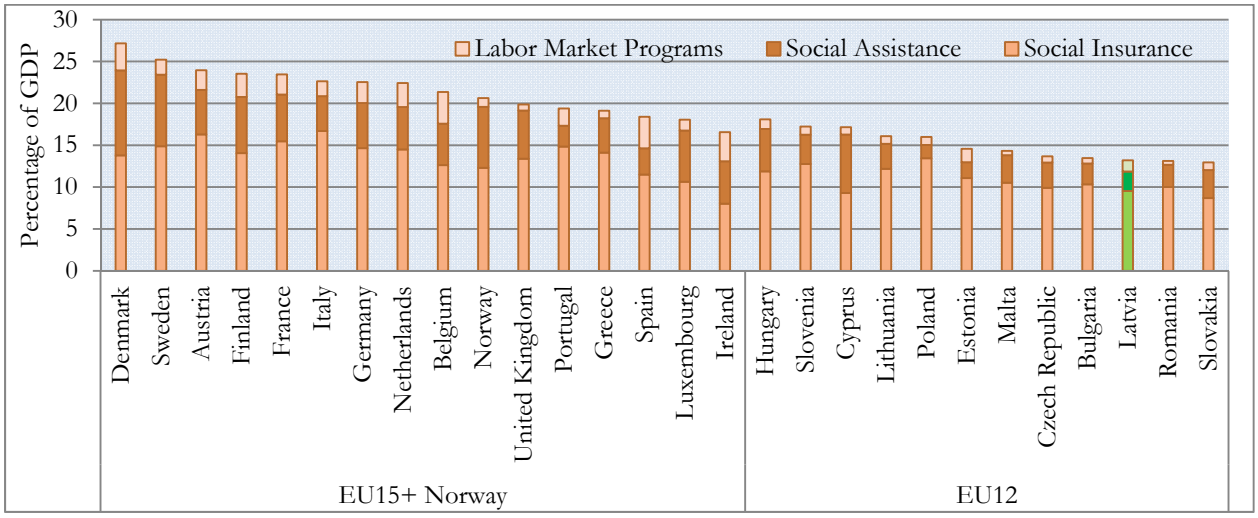
Among those social assistance programs delivered in cash, EU countries primarily allocate spending to programs benefitting families with children (about 50 percent of total spending on cash benefits). Latvia's spending on family and children allowances is higher than in other EU countries, as it absorbs about 60 percent of its social cash benefits (Panel A, Figure 3). On the other hand, among those benefits provided *in-kind* allocation of benefits across different categories greatly

[23] The time frame for the cross-country analysis in this note is 2008-2009, since ESSPROS data used for benchmarking was only available until 2009 at the time of writing. Subsequently, 2010 data was released, but it remains provisory for many countries. Post 2009 data based on administrative sources from the Ministry of Welfare is used to complement the analysis.

[24] European system of integrated social protection statistics (ESSPROS) data was used. To make a distinction between contributory and non-contributor transfers, the figures presented in this note do not follow the standard functional classification used in ESSPROS. See Annex 3 for additional information on methodology and limitations of the data used. Annex 3 also contains the main results of this activity.

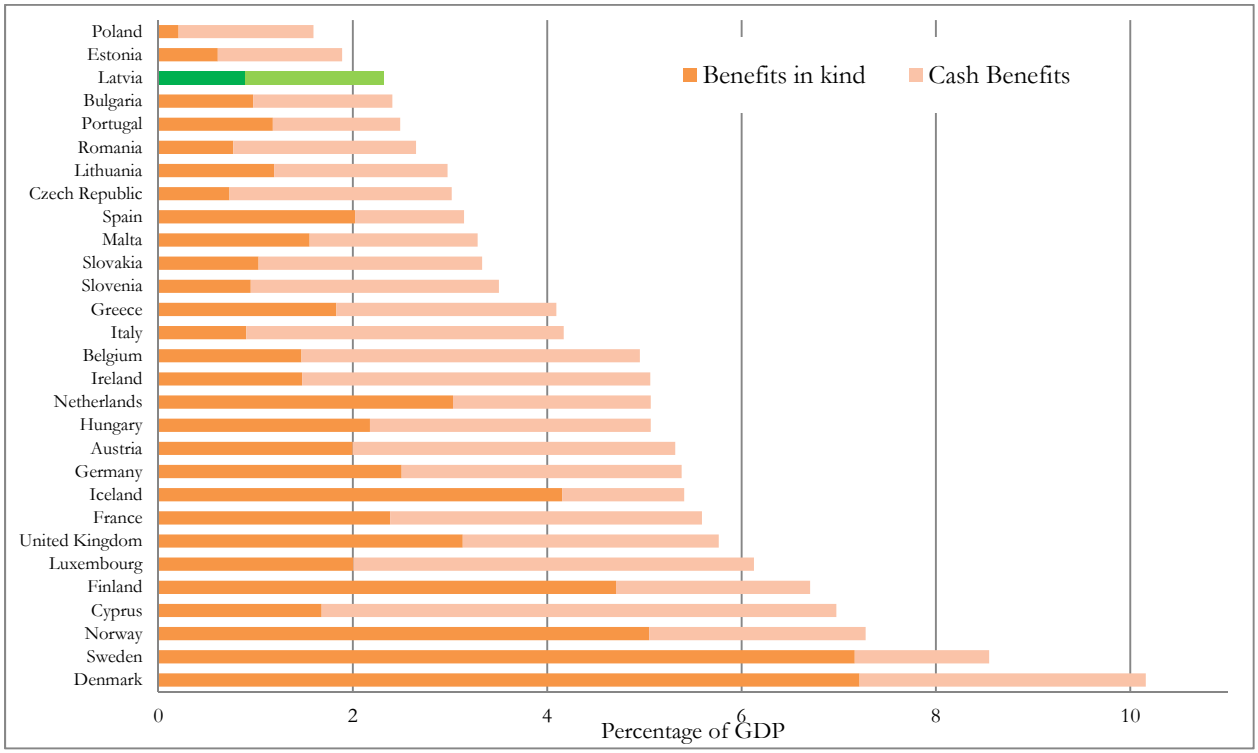
varies from country to country. For example, Poland allocates about 40 percent of in-kind benefits to social exclusion, while in Latvia distribution of in-kind benefits is much more uniform across various categories (Panel B, Figure 3).

Figure 1: Spending on social protection as a share of GDP, 2009



Note: Iceland not included. *Source*: ESSPROS data, World Bank staff calculations.

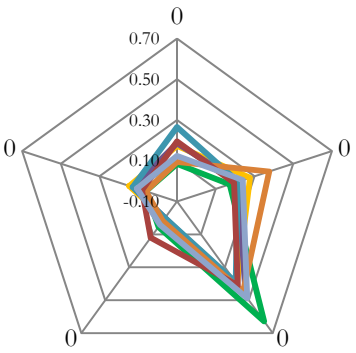
Figure 2: Spending on social assistance as a share of GDP, 2009



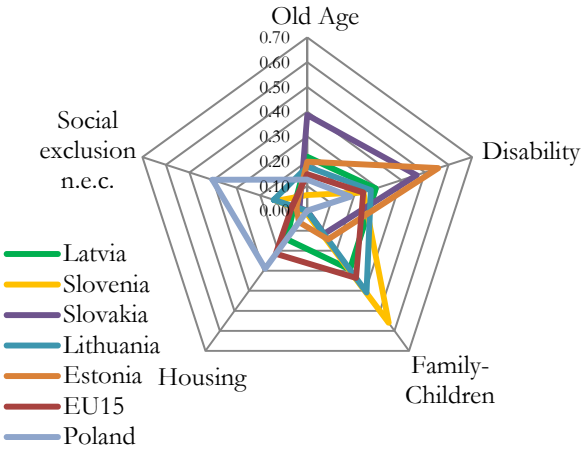
Source: ESSPROS data, World Bank staff calculations.

Figure 3: Distribution of social assistance benefits in cash versus in kind, 2009

Panel A: Distribution of cash benefits, 2009



Panel B: Distribution of benefits in kind, 2009



Note: The value of all components within each radar chart adds up to 100 percent.
Source: ESSPROS data, World Bank staff calculations.

Most European countries including Latvia spend a large share of their social assistance on programs that are not explicitly targeted at the poor. Nordic countries, Iceland and several other EU countries including Latvia spend more than 90 percent of social assistance on this type of programs. Only Portugal and the Netherlands dedicate most of their social assistance spending to means-tested programs, followed by France and Spain which spend about two-thirds of social assistance budgets on poverty-targeted programs. In Latvia and several other EU new member states, such as Estonia, the combined effect of very low social assistance spending and a high share of it going to non means-tested programs implies that very little resources are allocated to programs and benefits targeted to the poor.

Spending on means-tested income support for the poor is very low in Latvia - even in light of recent increases. Among EU countries with last-resort income support programs in place,[25] Latvia's spending on the guaranteed minimum income (GMI) program for the poor was one of the lowest in the EU in 2009, at 0.05 percent of GDP, (Figure 5).This is despite the fact that expenditure on this program more than *tripled* in real terms since 2008 due to anti-crisis measures put in place. In 2008, a mere 0.01 percent of GDP was spent on the GMI program. Even in 2011, expenditure on the GMI program remains very moderate at 0.16 percent of GDP, below what was spent on such programs in most EU countries in 2009. In addition to basic income support, many EU countries operate means-tested unemployment assistance schemes which provide cash income protection to the unemployed ineligible for unemployment insurance.

[25] The majority of the EU countries have last resort social assistance programs in place, with the exception of Greece and Italy.

Box 2: What is the appropriate size of social protection expenditures?

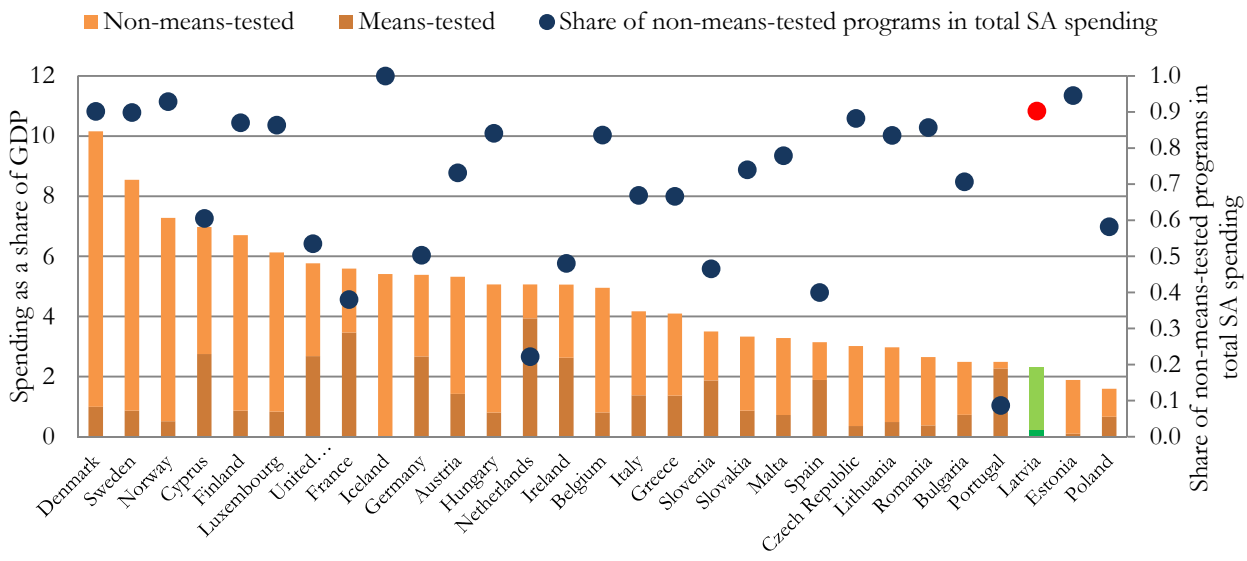
What is the appropriate size of social protection expenditures? The level of expenditures on total social protection varies from country to country, even within the EU. As expected, there is a positive correlation between the social protection spending and the *government size*, measured as the total general government expenditures as a share of GDP, but levels of social protection spending differ significantly for countries even with comparable government size. Countries like Lithuania, Poland, Spain, the United Kingdom and Norway have a similar *government size* to Latvia –around 45 percent of GDP. But their spending on social protection measured as a share of GDP is between 2 and 7 percent points more than Latvia's. Other countries like Romania, Bulgaria and the Slovak Republic allocate similar shares of their GDP to social protection, although their government size is smaller (see Annex 2, Figure A).

Social protection spending varies even in countries with similar income levels measured as GDP per capita in PPP terms. Romania and Bulgaria (USD 11,800 and USD 12,600, respectively) have a slightly lower income level than Latvia (USD 14,300) but spend on social protection as much as Latvia does. Lithuania with a slightly higher income level (USD 16,500) spends almost 3 percentage points more on social protection (see Annex 2, Figure B).

Comparing how much countries invest on social protection requires a careful assessment of the fiscal and economic situation of each country and the actual composition of these expenditures. Ultimately, as shown in Figures A and B in Annex 2, resources allocated to social protection depend on overall fiscal space. There is no a "one size fits all" answer to the question of how much countries *can* and *should* spend on social protection, but it is possible to assess what *could* be done to improve the outcomes achieved.

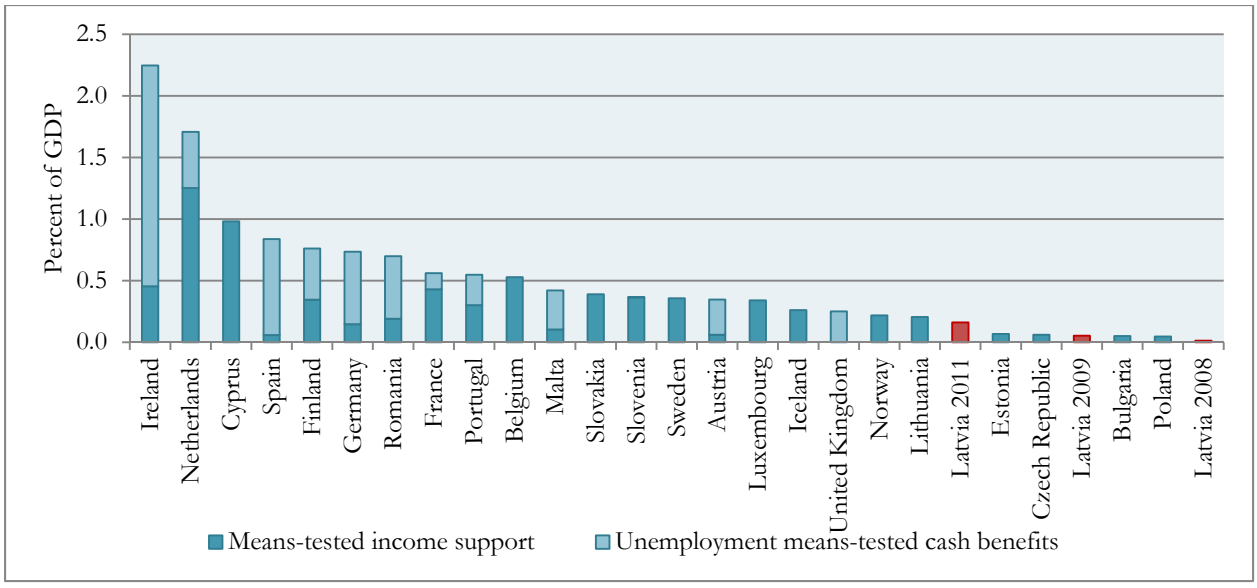
Source: World Bank staff.

Figure 4: Social assistance spending as a share of GDP (means-tested and non means-tested programs), 2009



Source: ESSPROS data, World Bank staff calculations.

Figure 5: Spending on means-tested income support and unemployment assistance as a share of GDP, 2009



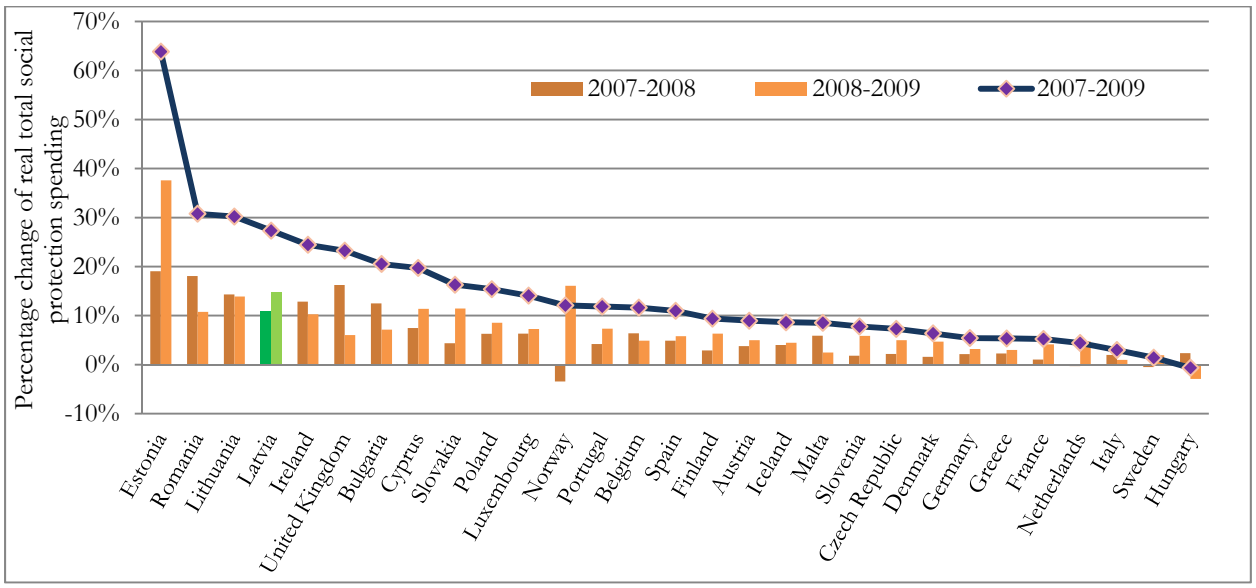
Source: ESSPROS data, Administrative data from MoW, World Bank staff calculations.

3. How did social protection spending change during and after the crisis?

In light of the recent financial and economic crisis, all countries except Hungary increased their *social protection* spending in real terms between 2007 and 2009 (Figure 6). While in times of crisis this is expected due to the operation of automatic stabilizers and increased demand for benefits, most countries also undertook specific countercyclical policy measures to offset effects of the crisis on household welfare.[26] In Latvia, real social protection expenditure increased by almost 30 percent between 2007-2009 following only Estonia, Romania, and Lithuania, in terms of expenditure growth rates (Figure 6).

[26] See Isik-Dikmelik, A. (2012).

Figure 6: Change in real spending on social protection, 2007-2009



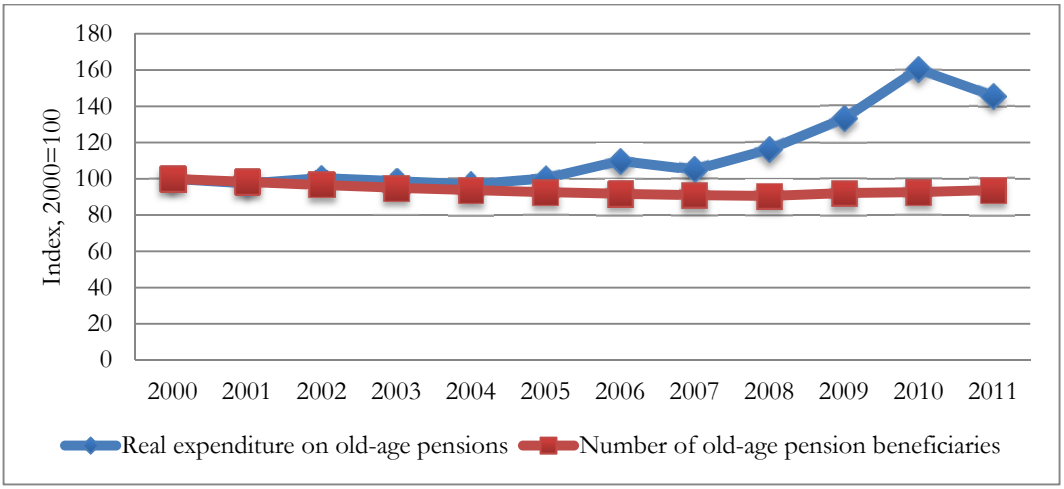
Note: Iceland's figures do not include spending on labor market policies; *Source*: ESSPROS data, World Bank staff calculations.

Expansion of social protection benefits in Latvia was primarily driven by social insurance benefits, such as pensions. Both *old-age* and *disability pensions* increased between 2007 and 2009 in Latvia (Figure 8: Panels A and B), and pensions are the main driver of social protection expenditures. This led to a significant expansion of expenditure on these items. In the case of old-age pensions, real expenditure on old-age pensions grew by 27 percent between 2007 and 2009. In the EU27 countries, expenditures expanded as well, but at markedly lower growth rates, particularly in benefits targeting *disability*, unemployment and *survivors*. Besides *old age,* the main increase in the fiscal impact in terms of GDP was in the case of *unemployment benefits* (Figure 8: Panels C and D).

In Latvia, most of the increase in pensions was automatic (in-built into the system) and not in response to the crisis,[27] **while the number of pensioners increased slightly**. Following freezes in indexation of pensions during the crisis, however, expenditures started to decline in real terms in 2011 (Figure 7). Like in many Central European and Baltic countries, Latvia experiences demographic pressure because of population ageing. In 2010, for every person aged 65 or more there were 4.2 persons in working age (15-64 years old). By 2050, this ratio is expected to decline to 2.5 active persons per elderly person, creating additional challenges to the social protection system, and particularly to the pension scheme's design (World Bank, 2011).

[27] The real notional interest rate for the pension system was 21 percent and 28 percent in 2008 and 2009. The notional interest rates remained high until 2009 due to the lag of about 18 months between the observed wage and benefit bill growth and its application to notional accounts, which meant that pensioners were still benefitting from the pre-2008 boom in 2009. See Harrold, Santos & Sinnott (forthcoming).

Figure 7: Real expenditure on old-age pensions and number of pension beneficiaries



Source: CSB data, World Bank staff calculations.

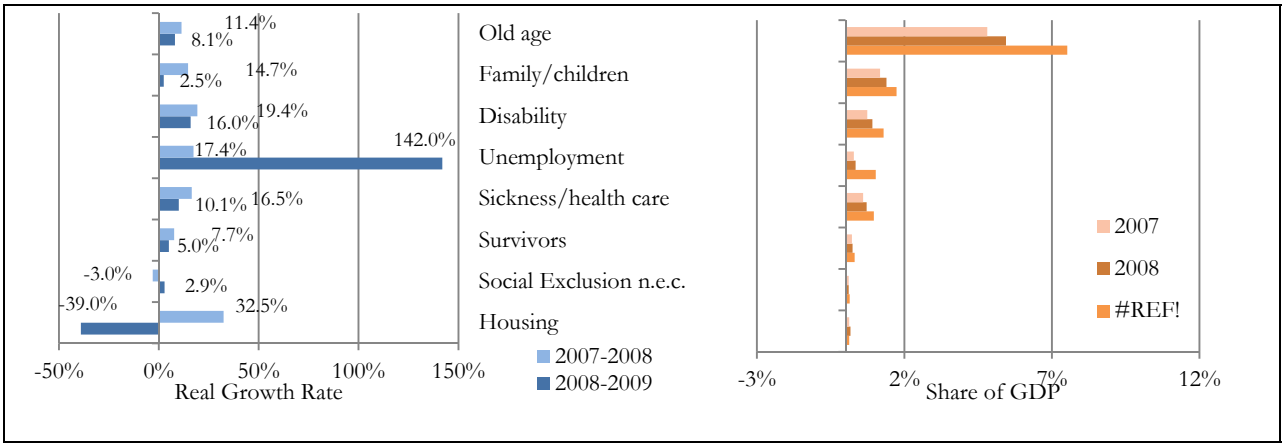
Figure 8: Social protection spending by function including pensions in Latvia and EU countries (2007-2009)

Panel A and C: Real Spending growth rate between 2007 and 2009 (percentage change)

Panel B and D: Spending as a percentage of GDP

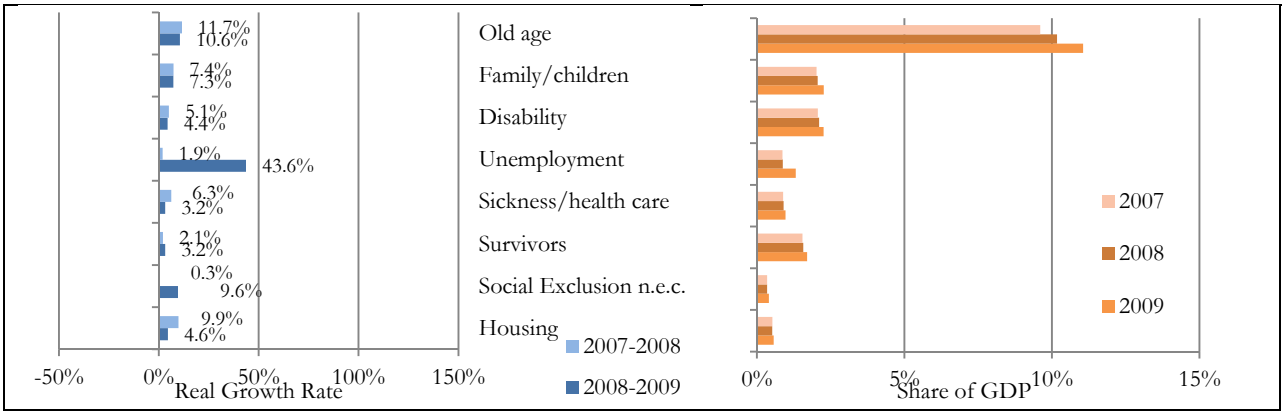
Panel A - Latvia

Panel B – Latvia



Panel C – EU 27 simple average

Panel D – EU 27 simple average



Source: ESSPROS data, World Bank staff calculations.

Social assistance spending grew more rapidly in Latvia between 2007 and 2008 compared to EU countries as a whole, but fiscal impact was relatively low. Between 2007 and 2008 real spending increased on most social assistance programs (excluding pensions) in Latvia, except for programs aimed at preventing social exclusion (Figure 9: Panel A). Increases in real expenditure ranged between 13 percent (family and children) and 33 percent (housing). As a result, overall real expenditure on social assistance increased by 16 percent in 2008 compared to 2007.[28] In contrast, average spending on social assistance programs in the EU increased across all functions but in much smaller rates, between 4 and 10 percent, except for programs targeting social exclusion which remained practically unchanged.

In contrast, between 2008 and 2009 total social assistance spending decreased in Latvia, compared to EU countries, where it continued to grow. From 2008 to 2009, real expenditure dropped for several types of social assistance programs (housing, old-age and disability social assistance benefits) in Latvia. Only programs targeting families with children and programs aimed at preventing social exclusion increased in real terms. Total expenditure on social assistance programs actually declined in real terms in 2009 by 3 percent.[29] In contrast, EU spending on social assistance increased in real terms between 2008 and 2009 by about 4.7 percent (Figure 9). Notably, programs aimed at preventing social exclusion expanded to a much larger degree in EU27 countries (9.6 percent), compared to Latvia, where they only increased by less than 3 percent in real terms between 2008 and 2009.

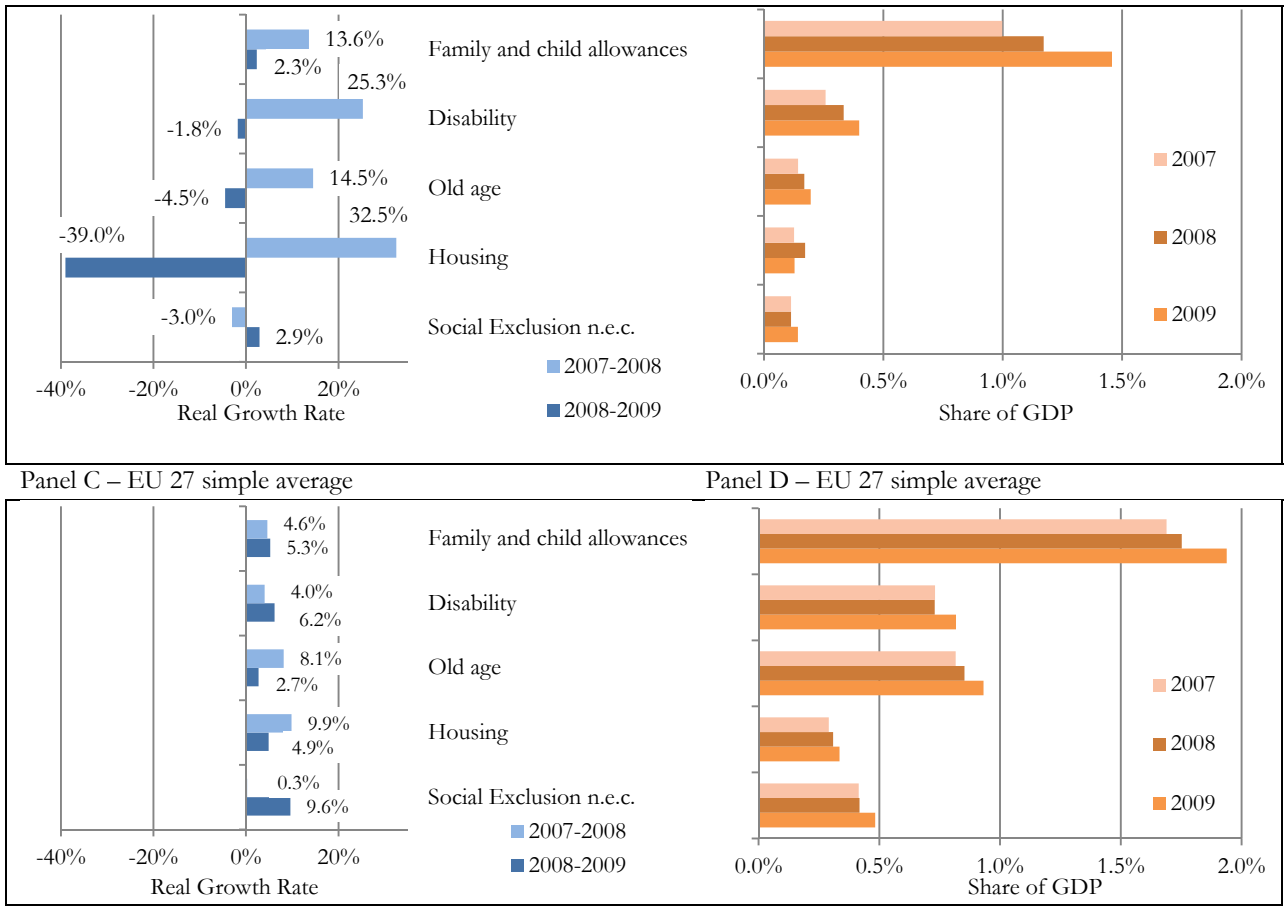
[28] However, as Figure 7-Panel B and D show that the fiscal burden of these increases was limited, with the exception of perhaps family and child benefits which is the largest item among all social assistance benefits.

[29] Only 3 other EU countries had a real decline in social assistance spending in 2009, i.e. Bulgaria (6 percent), Romania (2 percent) and Hungary (5 percent).

Figure 9: Social assistance spending by function in Latvia and EU countries (2007-2009)

Panel A and C: Real Spending growth rate between 2007 and 2009 (percentage change)

Panel B and D: Spending as a percentage of GDP



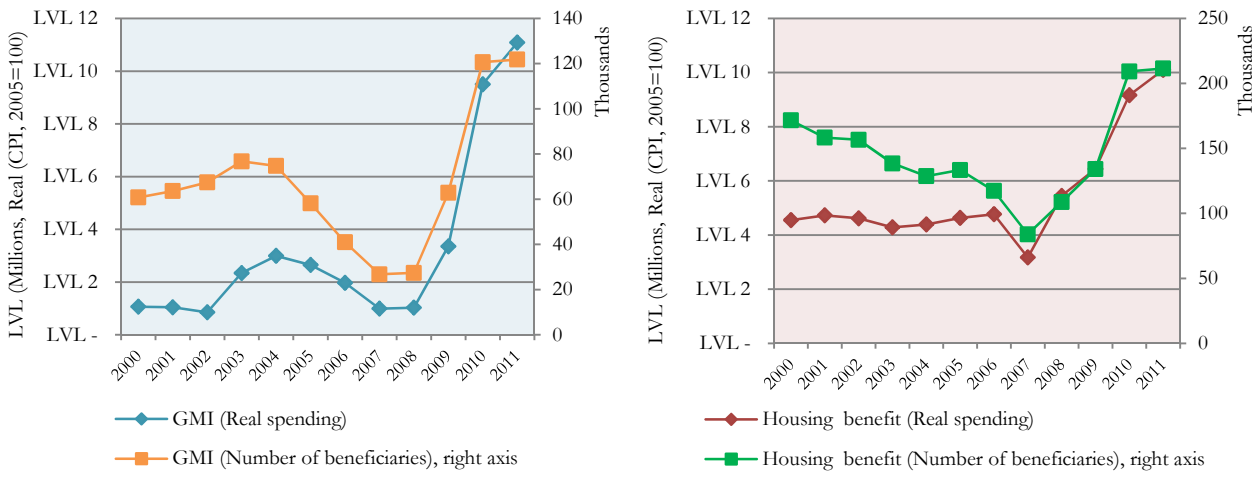
Source: ESSPROS data, World Bank staff calculations.

There has been an increase in real spending on means-tested programs, such as the housing benefit and the GMI program, following the crisis.[30] This represents a reversal in the decline of the GMI program during 2004 and 2008, when both the number of beneficiaries and spending dropped to particularly low levels (Figure 10). Expansion in the GMI program was not automatic and several policy adjustments were needed for the program to increase intake of beneficiaries including temporary central government co-financing (see Box 3). Spending on the housing benefit[31] has also expanded in recent years; however, it did not experience nearly the same decrease in spending over the years as the GMI program did. Similarly, central government co-financing was needed to allow for the benefit to respond to crisis.

[30] Administrative data on expenditure and number of beneficiaries from the Ministry of Welfare.

[31] The housing benefit is a separate municipal benefit. The amount of this benefit varies from one municipality to another depending on resources available. If the person is granted the status of a needy person and she/he has expressed a wish to be a tenant of a social flat (housing), the person can rent a flat as social housing where reduced rent and utility payments are charged. Between 2009 and April 2012, the benefit was co-financed by the central government. Source: MISSOC.

Figure 10: Main means-tested programs in Latvia, 2000-2011



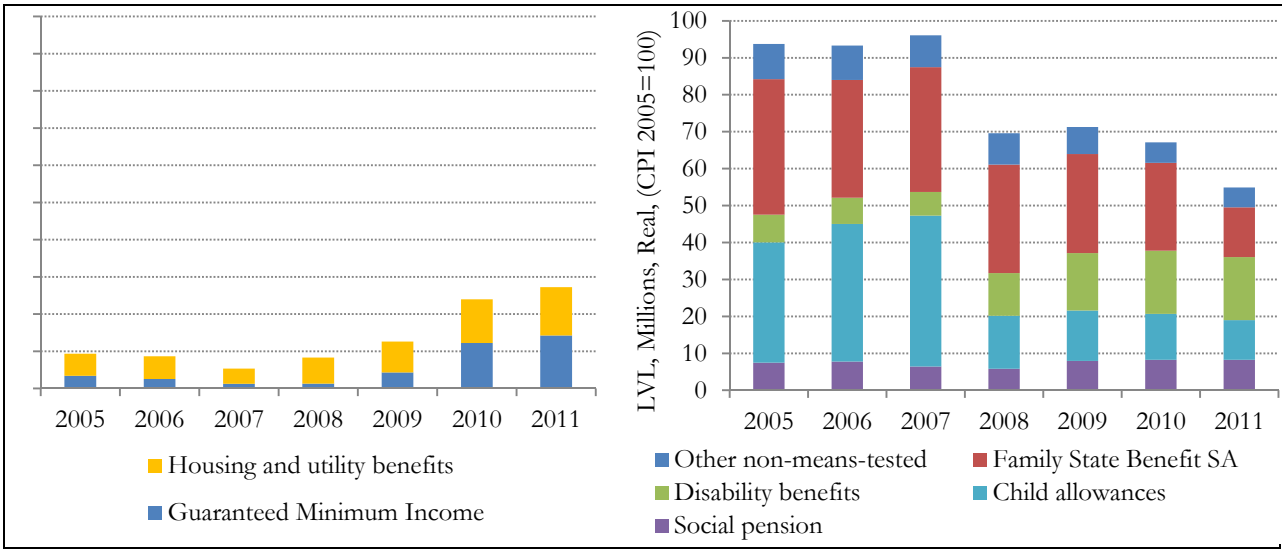
Source: Administrative data, World Bank staff calculations.

Despite recent changes spending on categorical programs continues to dwarf expenditure on poverty-targeted programs. While in recent years real spending on categorical programs, such as family and children allowances, has decreased (Figure 11), overall spending on such programs remains significantly larger than spending on poverty-targeted programs. It is also important to note that some of the observed drop in real expenditure on social assistance family allowances in 2008 has been off-set by an expansion of a contributory child care benefit which was introduced in 2008 without a corresponding increase in contribution revenue[32] (Figure 12 and Box 4).

Figure 11: Real social assistance spending in Latvia, 2005-2011

Panel A: Means-tested selected programs

Panel B: Non-means-tested selected programs

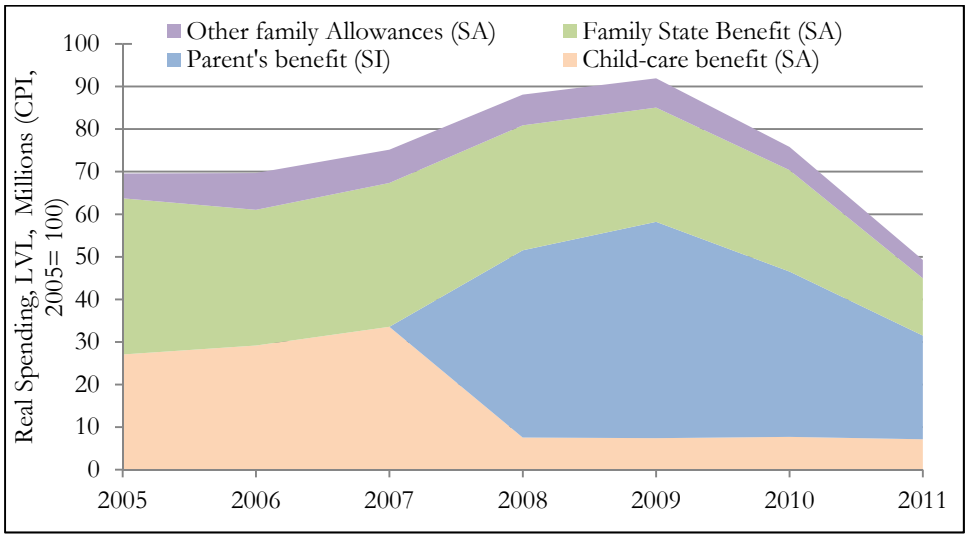


Source: Administrative data, World Bank staff calculations.

[32] See World Bank (2010).

Expenditure on the Family State Benefit program has been falling recently – both due to austerity measures and decreasing number of children beneficiaries. Family State Benefit is a universal (not means-tested) benefit which is granted to children under the age of 15 (or 19, if continuing education) attending educational establishments. The sudden decrease between 2009 and 2010 in both the expenditures and the number of beneficiaries is due to the legislation passed in June 2009 and taking effect in May 2010, restricting eligibility to children older than one year.[33] Additionally, starting from July 2009 on a temporary basis[34] the Family State Benefit was reduced to the amount to a flat 8 LVL per month per each child, while previously it ranged from 8 LVL per month for the first child in family to 14.40 LVL for fourth and further children. The combined effect of these two measures led to an observed decrease in spending.[35] However, one of driving factors behind continued decline in spending on this benefit is a long-term decreasing trend in the number of eligible children due to changing demographics (see Box 4).

Figure 12: Real expenditure on selected social protection programs in Latvia, 2005-2011



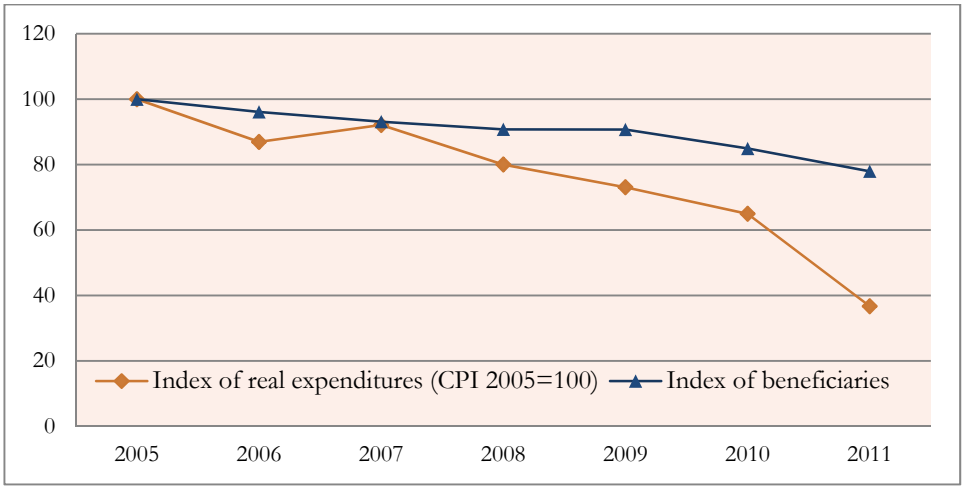
Source: Administrative data, World Bank staff calculations.

[33] 2009 Latvia's country chapter for OECD series "Benefits and Wages" http://www.oecd.org/dataoecd/10/46/47346573.pdf

[34] In accordance with the law "On state pensions and state benefits payment during period from the year 2009 till the year 2012" adopted in Saeima on 16 June, 2009. Ibid.

[35] In accordance with the Government decision and based on the report "On evaluation of social security provisions to come into force in 2013-15" it is envisaged that the current reduced flat rate monthly amount of LVL 8 will continue to be paid in 2013 and 2014. As of January 1st 2015, it is planned to resume the differentiation of benefit amount depending on the number of children in the family and to grant the benefit in double amount for the second child and in a triple amount for the third and each subsequent child. If these reforms are implemented, there could be a reversal of these trends.

Figure 13: Family State Benefit, 2005-2011



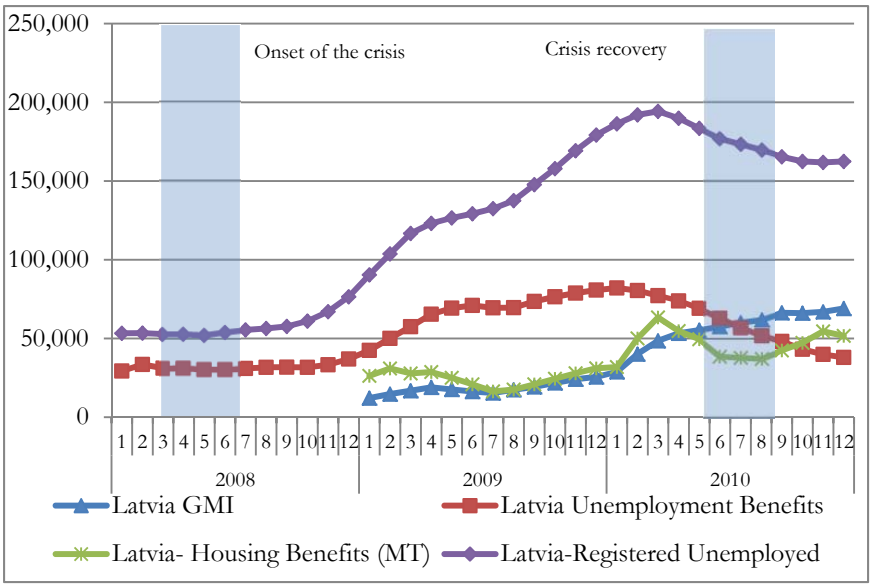
Source: Administrative data, World Bank staff calculations.

Fertility rates in Latvia are among the lowest in the new Member States, but it is unlikely that family cash benefits can significantly impact fertility. Combined with ageing of the population, low fertility contributes to the major demographic challenge that Latvia faces. Many countries in new Member States have been pursuing pronatalist policies, primarily by maintaining or increasing cash benefits to family with children (via social benefits or tax breaks). Literature shows that cash family benefits along are not likely to have a meaningful impact on fertility, while they do come at a significant cost since they are usually provided to all families regardless of income. More successful examples showcase that supporting services (such as free or affordable child care provision) are more likely to help boost fertility, than cash benefits alone (see Box 5).

Box 3: Expansion of the GMI program in response to the crisis

According to a World Bank study on social benefits response to the crisis in Europe and Central Asia, Latvia was among the countries least prepared to the crisis. The GMI benefit responded but response lagged 6-8 months from the onset of the crisis because reforms were needed to strengthen social assistance programs. However, once Latvia undertook the reforms, benefits responded in a decisive and sustained manner (see Figure B below).

Figure B: Number of beneficiaries of select social benefits in Latvia (2008-2010)



In Latvia, previously decentralized financing arrangements for the GMI were revised to prevent benefits from being rationed at the local level during the crisis. Before the crisis the GMI program in Latvia was completely decentralized, with local governments financing 100 percent of the benefits. However, local governments are required to carry a balanced budget, which puts considerable pressure on their budgets, especially during times of crisis. This can lead local governments to ration benefits at the local level. Recognizing this constraint, the central government revised the financing arrangements for the GMI program and put in place a central government financing guarantee (50 percent co-financing) to supplement the municipalities' spending on the GMI, which eased the pressure on local governments. Without this change in the financing arrangements (even with the same increase in the eligibility threshold), the expansion in the program would probably have been much smaller.

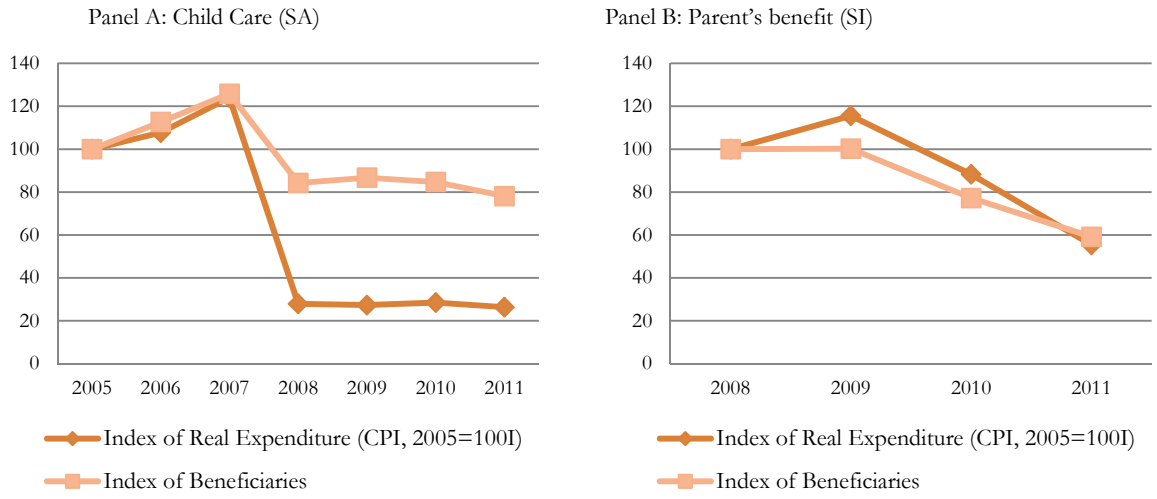
Recent reforms have largely reversed the situation. Starting from January 2013 the GMI benefit level was cut from 40 LVL to 35 LVL per month per person. This benefit level will be the same for children and adults (previously, children received 45 LVL). As previously, municipalities will have the option to set a higher level but this will depend on their fiscal situation. Furthermore, the central Government will no longer co-finance this program. Co-financing for the housing benefit was discontinued in April 2012.

Source: Adapted from Isik-Dikmelik (2012), World Bank Staff.

Box 4: Trends in spending on child care benefits in Latvia

Between 2005 and 2007 a non-contributory Child Care Benefit (CCB) was expanding, both in terms of real spending and the amount of beneficiaries. In 2008, a new Parent's benefit (PB) was introduced, eligibility to which was extended to those parents who were employed and contributed to the Social Insurance Fund. The flat-rated CCB remained available to the non-insured parents and accounted only for about 0.07 percent of GDP - a significant decline from 0.31 percent of GDP which was spent on this benefit in 2007. On the other hand, short after its introduction, the Parent's benefit greatly expanded - mainly in terms of expenditure, and remained quite stable in terms of beneficiaries until the end of 2009. After that, austerity legislation adopted by the Saeima on December 1, 2009 and further reforms in 2010 limited the benefits amount and restricted its coverage curtailing to some extent the previous expansion of this benefit (see Figure A below). Expenditure on it, however, remains at almost 0.3 percent of GDP primarily due to generous level of benefits. The benefit is 70 percent of the insured's average monthly earnings with an average monthly benefit equaling 316 LVL per month, while the CCB for the uninsured was only 50 LVL for each child under the age of one until recently.

Figure A: Non-contributory child care benefit and contributory parent's benefit, 2005-2011



Source: Administrative data, World Bank staff calculations.

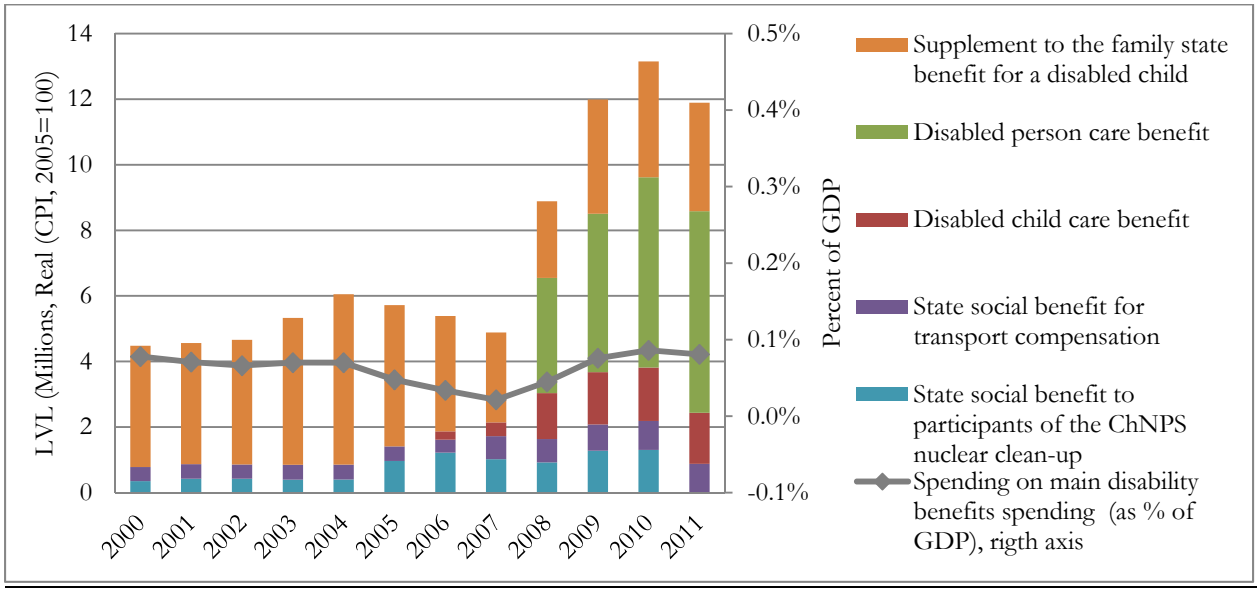
In 2013 generosity of child care benefits was increased. The amount of CCB for those unemployed parents, whose children are under 1 year old, was doubled (from LVL 50 to LVL 100 per month). Similarly, the benefit to parents raising children between the age of 1 and 1.5 (without regard of the parents' employment status) was increased from LVL 30 to LVL 100 per month. Also, the minimum amount of the Parents' benefit was increased from LVL 63 to LVL 100 per month. In addition the ceiling of the payment of the contributory maternity, paternity and parents' benefits was doubled (the maximum daily benefit will rise to LVL 23 plus 50 percent of the amount above LVL 23). On the other hand, the social insurance contribution rates (for state pension, unemployment and disability insurance) are bing increased for those who receive the CCB and have a child aged up to 1.5 years and those with children up to 1 year of age who also receive the Parents's benefit.

Source: World Bank staff, Ministry of Welfare.

Spending on non-contributory disability programs remains very low in Latvia. In Latvia, unlike in many other OECD and EU countries, non-contributory disability assistance spending

remains in check – despite recent introduction of new benefits. In 2008, disabled person care allowance was introduced for disabled adults who need special care.[36] While this led to an increase in spending, total spending on disability social assistance (excluding social pensions for the disabled) remains only at 0.1 percent of GDP (Figure 14).

Figure 14: Real expenditure on main disability benefits in Latvia, 2000-2011



Note: Not included is expenditure on the *State Maintenance Benefit (social pension) for reasons of disability.*
Source: Administrative data, World Bank staff calculations.

[36] Disabled person care allowance (Pabalsts invalīdam, kuram nepieciešama kopšana) of LVL100 (€143) per month is granted to persons over 18 years of age in respect of whom the Health and Capacity for Work Expert Physicians' Commission (Veselības un darbspēju ekspertīzes ārstu valsts komisija) has stated that disability exists and has issued an acknowledgment of the necessity for special care. Source: MISSOC.

Box 5: Pronatalist policies: A brief literature review

Latvia's population totals about 2.3 million inhabitants. Population has been slightly decreasing in the last decades, and it is projected that by 2030 Latvia's total population will shrink by 10 percent, and will reach 1.8 million inhabitants by 2050. In light of the increasing life expectancy (currently at about 68 years for men, and 78 years for women), and outmigration (about 10,000 emigrated from Latvia in 2010), the focus of attention shifts to fertility rates to balance the demographic challenge. Fertility rates have been slightly increasing in the last years of the past decade, but remain relatively low. At about 1.4 children per woman, Latvia's fertility rate compares to high income countries such as Italy or Germany (World Bank 2011). As such, the Government of Latvia faces a major policy challenge that is common to many other countries in the region. Like most countries in the Europe and Central Asia region, the primary focus in Latvias has been on cash benefits to families with children.

Empirical studies on the impact of policies targeting fertility have found, little if any, impact. Grant el al (2004) provide a literature review on policy interventions, concluding that policies can work, but no single policy works and the country context is critical. Gauthier and Philipov (2008) present the evidence on pronatalist interventions. The evidence is that financial measures that attempt to encourage parents to have more children—ranging from birth bonuses and tax breaks for children to more generous allowances to higher-parity births—have individually little or no impact. They may induce parents that were anyway going to have a child to have a child earlier. Examining two countries with relatively high fertility rates, Sweden and France, confirms that cash benefits, even rather generous ones, play a limited role. But packages of financial support including enabling services (child care) for families may be more successful. Grouping countries by the value of the whole package families receive (all tax concessions and benefits), the high ranking countries are also those with high fertility. But this is not causal and may reflect material ease, social values that encourage family spending etc. (Pailhé, Rossier and Toulemon, 2008; Andersson, 2008).

Source: World Bank staff.

4. How to evaluate performance of social assistance cash transfers? Methodology and data

How does social assistance in EU countries perform in terms of protecting the poor and vulnerable? While social assistance also needs to be empirically evaluated against its other objectives, in this note performance of social safety nets will be reviewed with respect to the objective of ***poverty alleviation***. Particular attention will be paid to fiscal impact and relative efficiency of different transfers in achieving this objective.

Data from the 2009 European Union Statistics on Income and Living Conditions (EU-SILC) is used to assess the performance of social assistance programs in Latvia compared to other EU countries. To the extent possible, a comparison to results based on 2008 EU-SILC data is made. Performance is analyzed with respect to: (i) coverage; (ii) targeting accuracy; (ii) the generosity of benefits; and (iv) impact on poverty. As mentioned in the introduction, for the purposes of this note, poverty is defined using a relative poverty line – those in the poorest quintile (poorest 20 percent) based on equivalized disposable income before all social assistance transfers are considered the poor.[37] Box 6 provides detailed definitions of performance indicators and additional information on methodology. It is important to note that the reference period for income data in EU-SILC is previous year, hence results from 2009 EU-SILC correspond to 2008 when it comes to incomes including receipt of social benefits.

National SILC data was used to assess performance of specific program in Latvia. Disaggregated Latvia national SILC data for the year 2011 was used to complement the analysis of program level performance, as well as to provide more recent estimates of coverage, targeting and generosity. Table 2 shows income levels for each quintile. In comparison, in 2011 the at-risk-of-poverty threshold in Latvia was 1,765 LVL (after social benefits). As a result, there is a significant overlap between these two groups: 95 percent of those "at-risk-of-poverty" belong to the poorest quintile.

Using household survey data has its limitations. While household surveys, unlike administrative data, allow estimating incidence of transfers for different socio-economic groups, using this data does not come without limitations. Some social assistance transfers are captured by surveys, while others are not. In particular, many in-kind transfers may not be included in survey questionnaires. Even if they are included, estimating the value of such in-kind transfers may be problematic. Consequently, the note focuses mostly on discussing cash social assistance only.

[37] Using a relative poverty line is consistent with the approach used in the EU. However, the poverty line we use is different from the 'at-risk-of-poverty' threshold, which is set at 60% of the national median equivalized income. The results are also available using this definition of poverty, but they are largely consistent with those presented in the note since there is a significant overlap between those at-risk-of-poverty and those in the poorest quintile. See Annex 1, last two columns of each table.

Table 2: Equivalized disposable income level by quintile in 2010

Quintile	Equivalized disposable income, LVL annually (before all social assistance transfers)
Quintile 1	LVL 0 – LVL 1,659.50
Quintile 2	LVL 1,659.51 – LVL 2475.50
Quintile 3	LVL 2,475.51 – LVL 3,436.00
Quintile 4	LVL 3,436.01 - LVL 4,939.60
Quintile 5	LVL 4,939.61+

Note: Income levels are based on annual equivalized household disposable income net of all social assistance transfers in national currency.
Source: Latvia SILC 2011 data, World Bank staff calculations.

The extent to which information on specific transfers is captured in the household surveys can vary across countries. It is assumed here that the EU-SILC national questionnaires capture existing transfers reasonably well in all EU countries. However, even then some under- or mis-reporting of income received from social protection transfers may exist, so results presented here should be taken as indicative.

Furthermore, using aggregate EU-SILC data available for all EU countries restricts the depth of the analysis to a significant extent. The EU-SILC data has many advantages as it provides comparable cross-country data on household incomes, economic status, labor market participation, and so on. However, information on benefit receipt is significantly aggregated in the data that is widely available to users. In particular, information on benefits is recorded in accordance with EU's functional classification, without making a distinction between contributory and non-contributory, means-tested or non means-tested, transfers. For the purposes of the analysis an approximate breakdown of available benefit types had to be made (Figure 15).

Box 6: Main indicators of performance of social assistance cash transfers

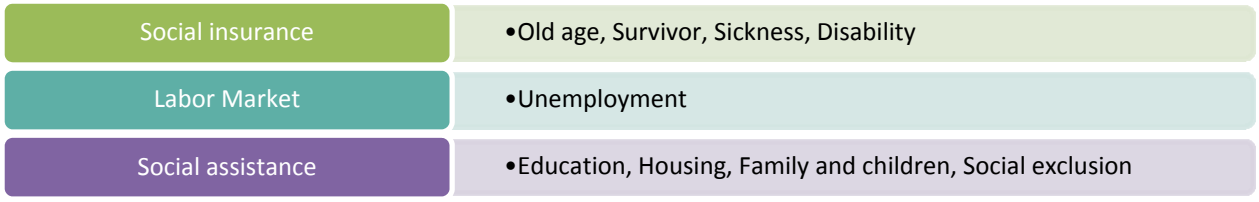
The main indicators of performance of social assistance cash transfers include:

- **Coverage:** What share of the population receives the transfers (focusing on the share received by the poorest quintile)?
- **Targeting accuracy:** What share of social assistance transfers goes to each quintile (with particular focus on the share of transfers that goes to the bottom quintile)?
- **Generosity:** How much is the transfer as a fraction of post-transfer disposable income? If this fraction is large, it would imply that the household is fairly dependent on the transfer. This could be either due to (i) the transfer being large so that the household is able to depend only on this transfer and does not have to find other means of generating income or (ii) the household finds it hard to generate any other income. In the latter case, it is particularly important to additionally assess adequacy of provided income support by comparing incomes of those dependant on income support to a poverty line or other objective measure of well-being or living standards.
- **Impact on poverty:** To what extent do social assistance transfers lift people out of poverty? To measure this impact, the amount of the transfers is removed from the income of the households, which allows estimating how many more individuals would be poor in the absence of these transfers.

For the purposes of the analysis, individuals are ranked on the basis of equivalized disposable income before all social assistance cash transfers and then divided into five equally sized groups, representing 20 percent of the population ("quintiles") to form the bottom, second, third, fourth, and top quintile. A standardized software (ADePT) developed by the World Bank's Development Economics Research Group is used.

Source: World Bank Staff.

Figure 15: Approximate breakdown of social benefits in EU-SILC



Source: World Bank Staff.

5. How effectively do social assistance cash transfers cover and target the poor compared to other EU countries?

In 2008, with the exception of a few countries, almost all poor were covered by *social protection* transfers in EU countries.[38] Most of the poor households in the EU countries receive at least one social protection transfer. Notable exceptions are Greece, Spain and Italy, where coverage of the poor is comparatively low (lower than 80 percent of the poorest quintile). In Latvia,

[38] As noted earlier, income reference period for 2009 EU-SILC corresponds to 2008.

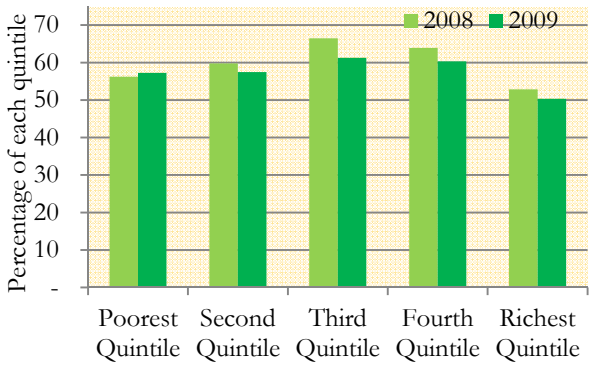
coverage of the poor by the overall social protection system is fairly high (approximately 90 percent) (Annex 1, Figure A1.1).

Coverage of the poor by *social assistance* transfers, on the other hand, is relatively low in Latvia. Approximately 57 percent of the poor receive at least one of the social assistance transfers, representing a relatively low coverage when compared to most other EU countries. The fact that about 40 percent of the poor are not receiving any social assistance indicates that important gaps in coverage exist. Moreover, we find that about 9 percent of the poor in Latvia get no transfers at all, either from social assistance or from social insurance programs.

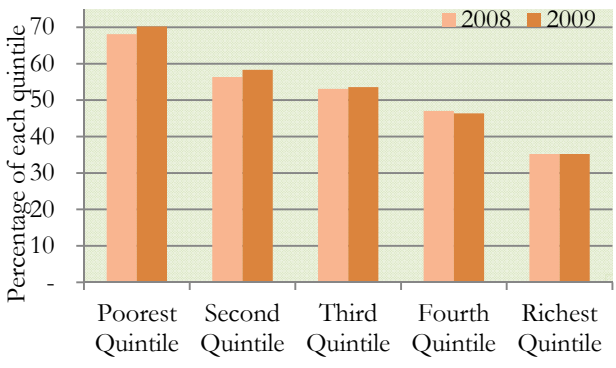
In contrast, the relatively high social assistance coverage of the richest quintile indicates that some inefficiencies may exist. The share of the rich covered by social assistance in Latvia is the fourth highest in the EU with about 50 percent of those in the richest quintile receiving some social assistance benefits (Figure 16). Because many EU countries provide some categorical social assistance programs, such as family benefits regardless of the income of the family, a large share of those in the richest quintile also receive social assistance. As seen before, Latvia is one of the countries with the highest share of categorical social assistance programs, so subsequently coverage of the rich is also very high.

Figure 16: Coverage of social assistance programs by quintile, 2008 and 2009

Panel A: Latvia



Panel B: All other EU countries



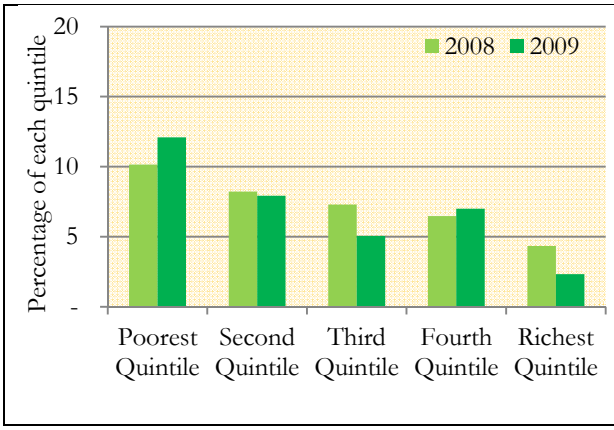
Source: EU-SILC 2008 and 2009, World Bank staff calculations.

In line with the low coverage by overall social assistance, the coverage of the poor by social exclusion benefits in Latvia is also low when compared to other EU countries. Social exclusion benefits—which include minimum income support programs and other programs aimed at the poor and vulnerable—are the main transfers targeted towards the poor in EU countries. Surprisingly, these transfers cover only a small proportion of poor people (Figure 17). In 2009, the proportion of those in the poorest quintile who receive such benefits as the GMI is only slightly above 12 percent compared to 18 percent on average for EU countries, but is somewhat higher than in the previous year, 2008, at 10 percent. The low coverage among the bottom quintile indicates that

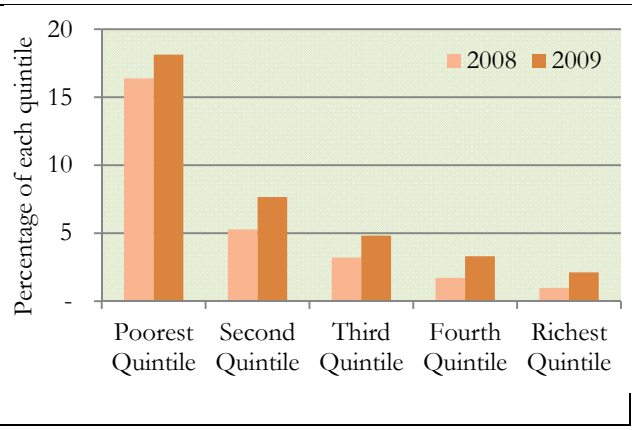
the majority of the poor rely on other transfers, such as the family benefits or disability benefits or other programs which might not be aimed specifically at the poor, for income support.

Figure 17: Coverage of social exclusion benefits by quintiles, 2008 and 2009

Panel A: Latvia



Panel B: All other EU countries



Source: EU-SILC 2008 and 2009, World Bank staff calculations.

Distribution of social benefits in Latvia is strikingly regressive. The share of all social assistance benefits going to the poorest quintile, or targeting accuracy, is under 20 percent in 2009, while the share of benefits going to the richest quintile is almost 27.5 percent. This is strikingly different from a typical progressive distribution of social assistance benefits in other EU countries, where, on average, the poorest quintile received more than 40 percent while the richest under 10 percent (Figure 18, Panels I-II). At the same time, targeting differs by types of benefits. For example, housing benefits are well targeted—better than the EU average—with two-thirds of all benefits going to the poorest quintile (Figure 18, Panels III-IV).

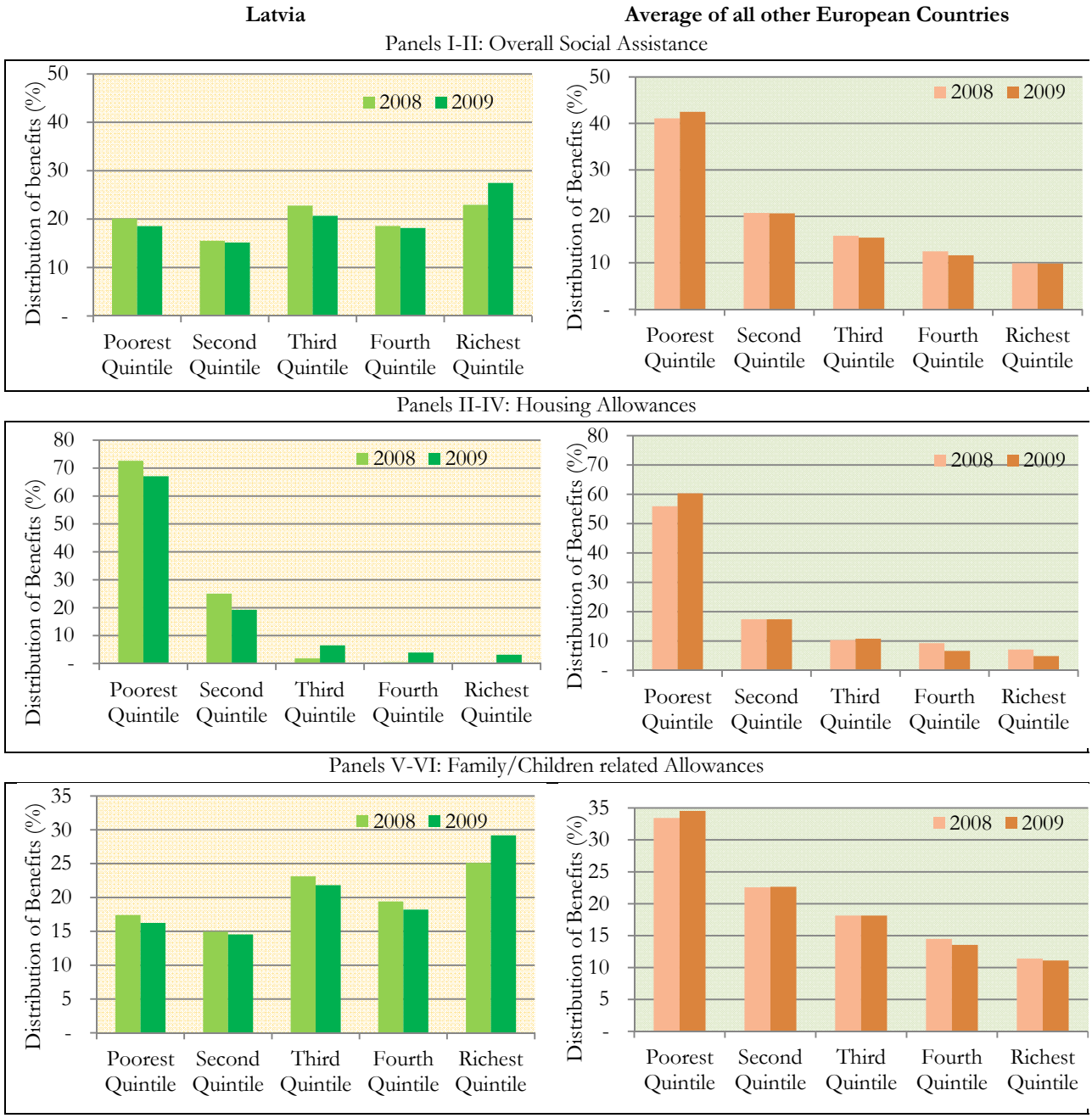
Family and children benefits are the least targeted among all social benefits in Latvia. Almost 30 percent of all benefits in this category, which in this case includes both contributory and non-contributory benefits due to the data limitations, accrue to the richest quintile. Additionally, the distribution of benefits has shifted toward upper quintiles between 2008 and 2009, undoubtedly due to reforms in the child care benefits described above. In other EU countries, even though family benefits are often not poverty-targeted, they tend to overwhelmingly benefit the poorer quintiles (Figure 18, Panels V-VI).

As expected, contributory family benefits are particularly regressive. More than 80 percent of these benefits (including the parental benefit) go to the richest two quintiles of the population, and less than 5 percent of these benefits reach the poorest quintile. This can be expected, as benefit levels for such contributory programs are linked to previous earnings (Annex 4, Table A4.2:).

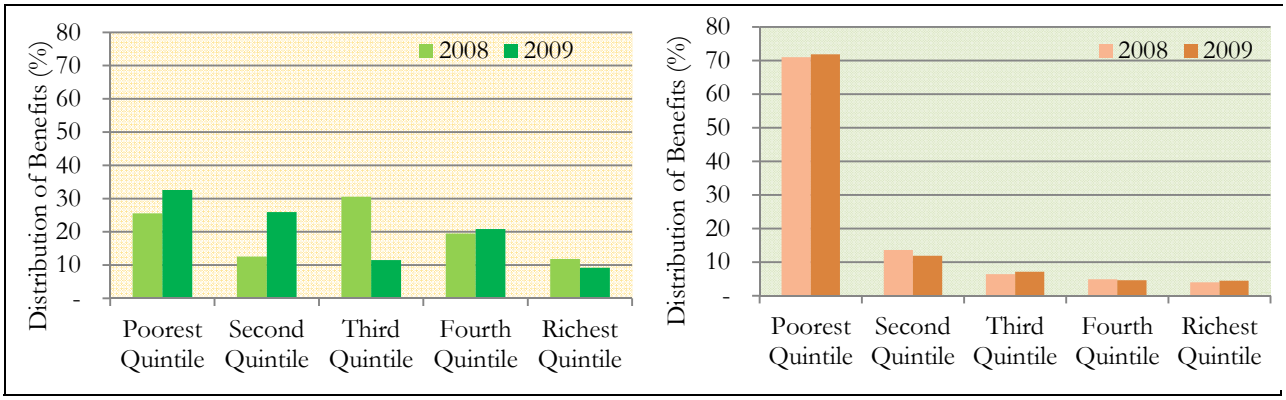
Non-contributory family allowances are better targeted, but there is a significant room for efficiency gains. About 30 percent of the non-contributory State Family Benefit goes to the

poorest quintile, and slightly more than 30 percent reaches the second and third quintile altogether. This means than more than a third goes to the two upper quintiles of the population. Similarly, more than 30 percent of Child Care benefits goes to the bottom quintile while 40 percent reaches the fourth and fifth quintiles. The Child birth grant is particularly regressive, with more than half of the benefits going to the two upper quintiles (only 16 percent goes to the poor). As a result, there is significant leakage of these benefits to the richest groups of the population and there is a potential for savings from means-testing these programs (Annex 8, Table A4.2:).

Figure 18: Targeting accuracy of social assistance and its main components, 2008 - 2009



Panels VII-VIII: Social Exclusion not elsewhere classified



Source: EU-SILC 2008 and 2009, World Bank staff calculations.

Surprisingly, targeting of social exclusion benefits which are meant to protect the poor and vulnerable could be improved. Social exclusion benefits, which besides the centrally mandated GMI program include a variety of benefits implemented and financed at the local level and central level,[39] are distributed across all income quintiles. While targeting has improved between 2008 and 2009 with the share of benefits accruing to the poorest quintile increasing from about 25.5 percent to 32.5 percent, it remains substantially below average targeting accuracy for these benefits in other EU countries. In the rest of the EU, more than two thirds of social exclusion benefits go to the poorest quintile, which is likely to be the primary target for these programs (Figure 18, Panels VII-VIII). A review of these programs and their effectiveness is needed to ensure that they are achieving their purpose.

The GMI program, however, shows impressive targeting in recent years. Disaggregated analysis using more recent Latvia SILC data (2011) shows the GMI program has virtually no leakage to the upper quintiles with 91.3 percent of the benefits accruing to the poorest quintile and further 7.1 percent received by those in the second quintile. These results are also consistent when 2010 data are used. It is targeting of the non-GMI programs which contributes to the worse targeting of social exclusion benefits. Currently about 40 percent of spending on these programs, which include other municipal benefits, but also several central government programs, goes to the top three quintiles.[40]

In terms of generosity, social exclusion benefits in Latvia, and the GMI program, in particular, do not appear to provide adequate income support. Whether social exclusion

[39] ESSPROS and SILC do not necessarily aggregate the same variables programs, and this case is an example for it. While in Latvia, SILC aggregates both GMI and other municipal benefits including funeral allowances, lump-sum municipal benefit in emergency situation, benefit for politically repressed, compensation paid to persons engaged in work in the galleys and other municipal benefits (for education and upbringing, partly paid meals, kindergarten fees, etc.), ESSPROS includes funeral benefits into Survivor's benefits.

[40] These benefits include funeral allowances, lump-sum municipal benefit in emergency situation, benefit for politically repressed, compensation paid to persons engaged in work in the galleys and other municipal benefits (for education and upbringing, partly paid meals, kindergarten fees, etc.).

benefits such as the GMI program provide an effective income support is a concern in Latvia. These benefits appear to contribute very little to incomes of those in the poorest quintile (Annex 4, Figure A4.3). Less than 10 percent of household disposable income of those in the poorest quintile comes from these benefits.[41]

Those who rely on the GMI program are at a high risk of poverty. Comparing benefit levels to the at-risk-of-poverty threshold also suggests that minimum income beneficiaries in Latvia are significantly worse off compared to people receiving such benefits in many other EU countries (Figure 19)[42]. In 2010, almost 75 percent of GMI beneficiaries were at risk of poverty compared to just 17.5 percent among non-beneficiaries[43]. This is in part due to the fact that the GMI level is not tied to any indicators characterizing the level of living standards such as the minimum wage or the subsistence minimum calculated by the Central Bureau of Statistics or the poverty line, such as the at-risk-of-poverty threshold.[44]

Adjustments to the GMI benefit levels do not always ensure that beneficiaries are not worse off compared to the rest of the population. Over 2005-2008, the nominal growth in GMI benefit levels was adequate to compensate for inflation, but fell short of rates of growth of both the minimum and, particularly, average wages (Figure 20, left panel). As a result, the living standard of minimum income beneficiaries has deteriorated relative to other population groups in this time period. During 2009-2012, the relative situation of the GMI beneficiaries has improved slightly, due to increases in the GMI benefits and simultaneous drop in average wages due to the economic crisis (Figure 20, right panel). In 2013, however, the GMI benefit levels was cut, which will further increase the gap between the GMI benefit and minimum and average wages and further exacerbate the risk of poverty among the GMI beneficiaries.

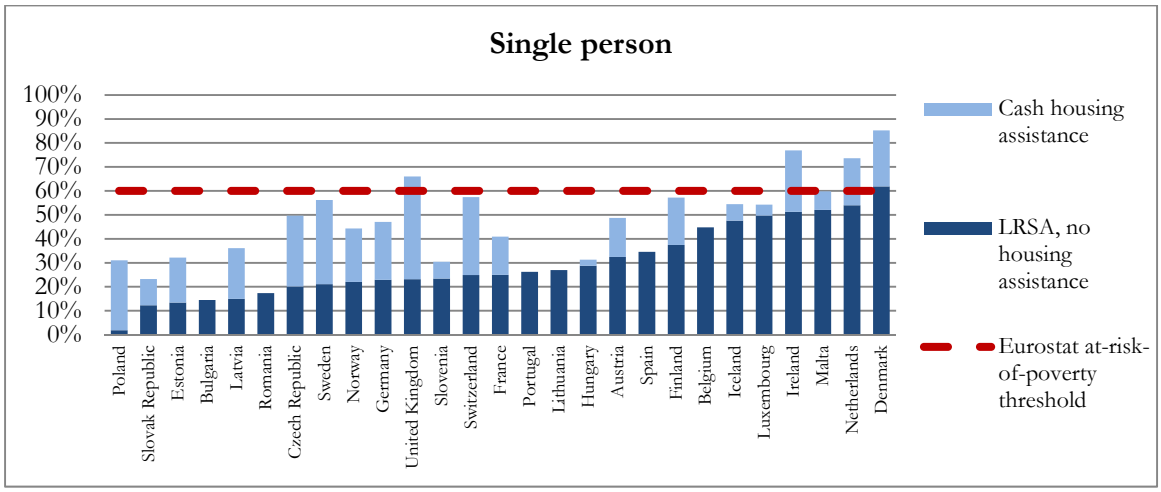
[41] Benefits are calculated and expressed as a percentage of post-transfer income for beneficiary households in poorest quintile based on household survey data.

[42] Benefit entitlements according to the rules are calculated for representative households with no other incomes and are expressed as a percentage of the median equivalized household disposable income.

[43] Latvia SILC 2011, Staff calculations.

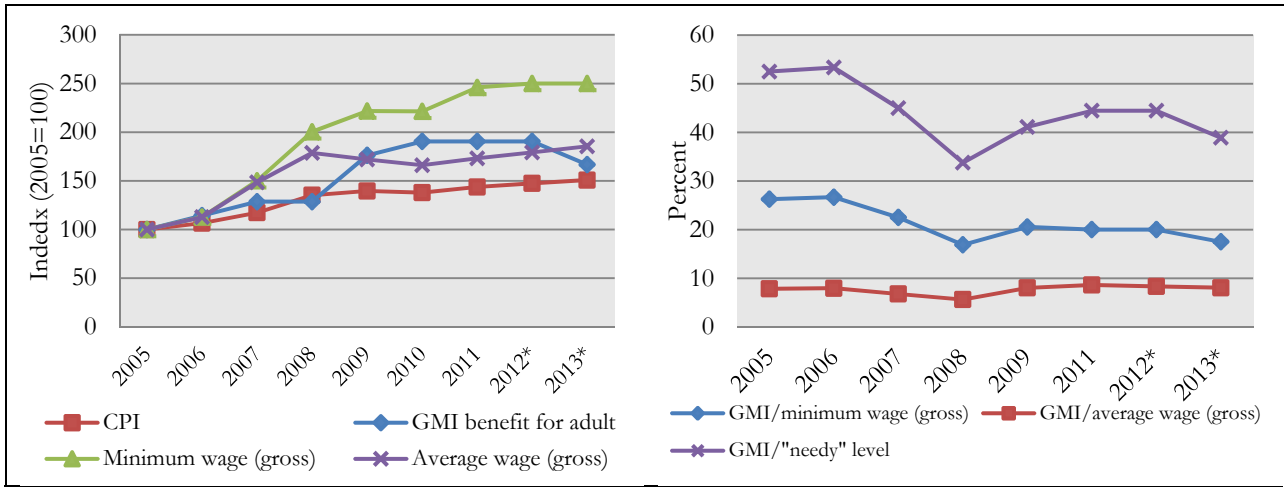
[44] The GMI level is set by the Cabinet of Ministers. See Lace (2009).

Figure 19: Benefit levels as a share of median equivalized disposable income in 2010



Notes: At-risk-of-poverty thresholds are those used by Eurostat (60 percent of median equivalized household income).
Sources: OECD/EU Tax and benefits indicators database.

Figure 20: Nominal GMI benefit levels, CPI, minimum and average wages



Notes: * Estimations based on the following assumptions: 2013 minimum wage equals to 2012 level; 2012 and 2013 average wage is assumed to grow at 3.5 percent.
Source: Eurostat, Central Statistical Bureau of Latvia, MoW, World Bank staff calculations.

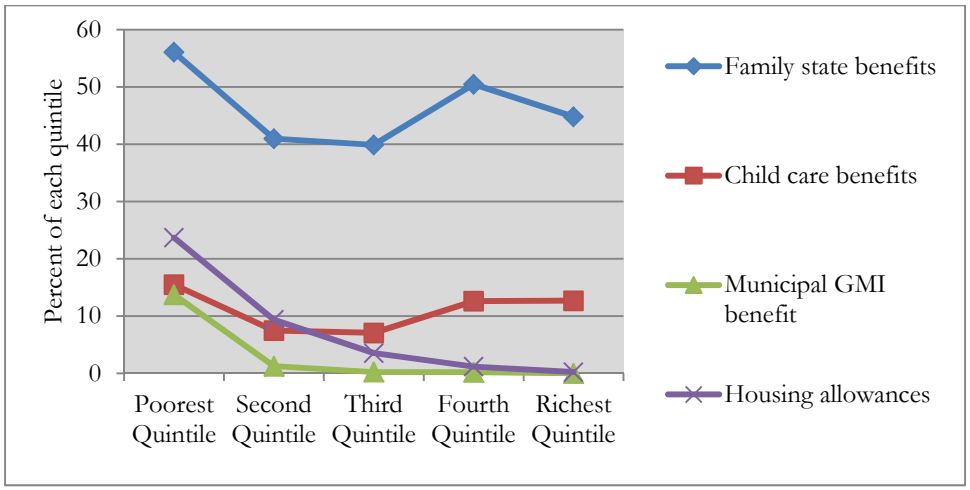
6. How do different social assistance benefits in Latvia perform compared to each other[45]?

The Family State Benefit by far covers the most of the poor, but a significant share of the rich are also covered. In 2010, more than half of those in the poorest quintile received this benefit.

[45] Analysis in this section is based on disaggregated data from Latvia SILC (2009-2011). See Annex 4 for detailed program level performance indicators.

Since the benefit is not targeted, coverage of other quintiles is also quite high (Figure 21). Coverage of other universal non-contributory programs, such as the child care benefit, is similarly distributed across quintiles. Among poverty targeted programs, the housing benefit covers almost a quarter of those in the poorest quintile with coverage dropping drastically after the second quintile. The GMI benefit almost exclusively covers only those in the poorest quintile with virtually no beneficiaries in the second and higher quintiles.

Figure 21: Coverage of social assistance programs, by quintile, in 2010

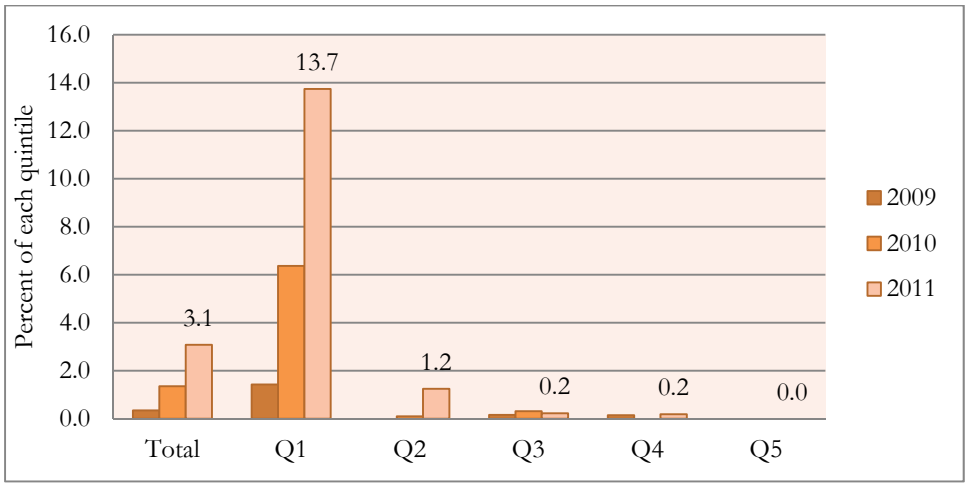


Source: Latvia SILC 2011. World Bank staff calculations.

Note: Family state benefits include the Family State Benefit and supplements to families with disabled children. Child care benefits only include non-contributory child care benefit and supplements for disabled children.

Despite recent increases in coverage, the GMI program covers very few of the poor. In 2010 the GMI program covered only 13.7 percent of the poor. Gaps in coverage need to be investigated to assess what is causing such low coverage. They are likely related to particularly low eligibility thresholds, which do not capture a significant share of the poor, but also could be due to restrictive criteria, such as ownership of particular assets which could exclude transitory poor. Alternatively, there may be administrative or other barriers such as stigma preventing potentially eligible beneficiaries from applying.

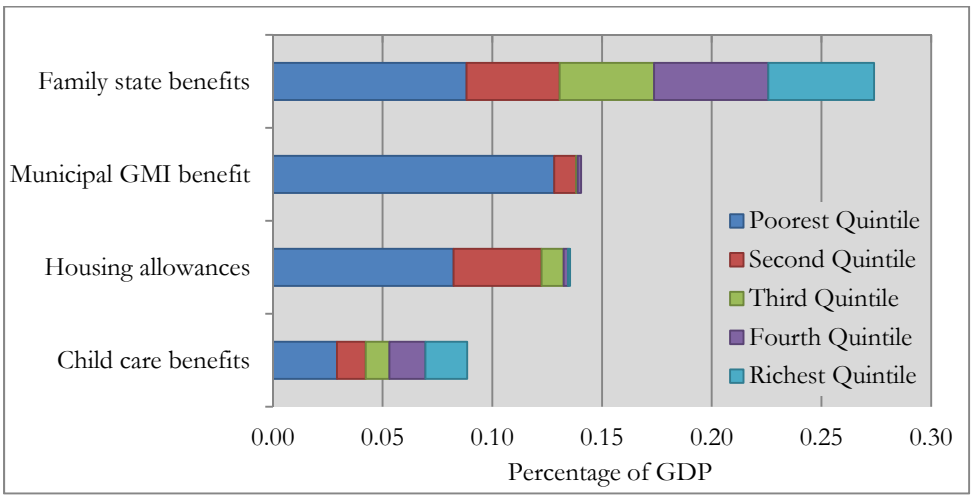
Figure 22: Coverage of the GMI program, by household income quintile, 2008-2010



Source: Latvia SILC 2009-2011. World Bank staff calculations.

Means-tested programs, such as the GMI, are more efficient than non means-tested programs at transferring resources to the poor. Most of the spending on the GMI program goes to the poorest quintile (GMI spending is equal to approximately 0.14 percent of GDP). In contrast, only about one third of all spending on the non means-tested Family State Benefit goes to the poor while the rest, which is about the same as total spending on the GMI program, goes to the non-poor (Figure 23).

Figure 23: Public spending on main social assistance programs in Latvia, by household income quintile, 2010



Source: Source: Latvia SILC 2011.Administrative data from MoW, World Bank staff calculations.

Note: Family state benefits include the Family State Benefit and supplements to families with disabled children. Child care benefits only include non-contributory child care benefit and supplements for disabled children.

However, low coverage and low generosity limits the poverty impact. As was noted earlier, coverage of the social exclusion benefits and generosity of benefits is low in many countries, raising

a concern of whether they reach all those in need. A combined effect of these factors is that the impact of means-tested programs on poverty is often limited. In 2010 in Latvia, the GMI program had minor impact on the at-risk-of-poverty rate, which would have been only 0.37 percentage points higher in the absence of the program. In contrast, this indicator increased by 3 percentage points (from 19.2 percent to 22.2 percent) in the absence of all social assistance programs (Annex 4, Table A4.4).

This implies that non means-tested programs often deliver crucial support to the poor. So the challenge is not simply cutting non means-tested programs across the board, but perhaps in means-testing them with a relatively generous cut-off that includes those in need, but exclude the rich from these transfers.

Targeting has its limitations, but in difficult economic times, it is a way to achieve fiscal savings without minimizing the protection objective of the social protection system. Targeting social benefits is a way to achieve higher efficiency of social spending, but there are costs to targeting. Some of the primary concerns of targeting social benefits is low take up (i.e. costs of applying to benefits or stigma attached to means-tested benefits can deter some from applying), administrative costs of targeting (verifying eligibility) and potential work disincentive effects. Finally, political support for narrowly targeted social benefits can be low jeopardizing their sustainability over time. Box 7 illustrates the tradeoffs of pursuing targeting during fiscal consolidations, as well as some ways to overcome its weaknesses.

In Latvia, there appears to be some room for reallocation of spending toward poverty-targeted programs. In 2009, not taking into account non-cash benefits and the parent's benefit, only about 20 percent of all social assistance spending went toward means-tested programs Latvia.[46]While this share has increased in recent due to the expansion in the GMI program and some measures taken to curtail family benefits expenditure, there still is room to reallocate spending away from programs that are not targeted to the poor. Given the low spending on overall social assistance and low generosity, some, if not all, of the savings would need to be channeled to increase coverage and adequacy of the minimum income support.

Targeting of family benefits can generate the fiscal space needed for other programs, without necessarily incurring into efficiency losses. Past calculations had already shown that, for example, about LVL 17.3 million could be saved from targeting the family state benefit with a relatively generous threshold such as the 40 percent of least well-off households (World Bank 2010b). Based on Latvia SILC 2011 data, simulations of perfect targeting to the bottom 40 percent of the three main non-contributory family benefits (Family State benefit, Child Birth and Child Care benefits) allow for about LVL 30 million, or 0.23 percent of GDP, in savings assuming same benefit levels and number of beneficiaries as in 2010. Excluding only the top 40 percent of the population of these three benefits represents savings of about 22 million, or 0.17 percent of GDP.

[46] If ESSPROS data is used, this share is only 10 percent.

Box 7: Costs and benefits of targeting in fiscal consolidation measures

Fiscal consolidation is likely to be achieved through a mix of revenue and spending measures. And in each case, **appropriate targeting can limit adverse distributional consequences**.

On the **tax side**, replacing expensive and badly targeted indirect-tax concessions (for food, clothing, etc.) with direct support for low-income households would yield sizeable fiscal gains and reduce inequality. Progressive measures, such as raising ceilings on social security contributions or reducing tax avoidance or evasion among higher-income groups, would also generate revenues while strengthening redistribution.

On the **benefit side**, targeted measures can help to make fiscal consolidation measures more equitable. Further means-testing can reduce benefit expenditures while protecting the most vulnerable. At the same time, benefit cuts are likely to contribute to higher inequality, if transfers are already highly targeted. Means testing also imposes economic costs. Work disincentives associated with targeting on family income are likely to become more damaging once labor demand starts to pick up during a recovery. In addition, means-tested programs often suffer from low benefit take-up, resulting in poor coverage among the targeted population and less success in reaching vulnerable groups.

Targeting on ***behavior*** or ***non-income characteristics*** is an alternative that can produce cost savings, while leaving incentives intact. One example is the use of broad indicators of deprivation, which many countries apply in order to determine eligibility for social housing. These can be a good basis for effective targeting, especially for services and in-kind transfers, without reducing incentives to find employment. Some forms of ***conditional cash transfers***, such as those pioneered in Mexico and Brazil, can in fact create ***positive*** externalities by promoting beneficial health or educational outcomes. The concept of **"*mutual obligations*"** also makes benefits conditional on claimant behavior and aims to restore self-sufficiency and prevent long-term benefit dependency.

Again, these are examples of positive externalities created by targeting. As more job vacancies are posted during a recovery, there is indeed a stronger case for linking benefit receipt more tightly to job-search or availability-for-work requirements. In the context of fiscal consolidation, an important consideration is the need for adequate administrative and operational resources to enable an effective implementation of "mutual obligations" and other targeting measures.

Source: Adapted from OECD (2011).

7. How does Latvia's spending on labor market programs compare to that in other EU countries?

Most EU countries allocate a relatively small share of overall social protection spending to labor market policies (LMPs).[47] On average, the EU countries spent about 2.2 percent of GDP on labor market policies in 2009, or approximately 10 percent of their total social protection spending. However, spending varies from less than 0.5 percent of GDP in Romania to 3.8 percent in Belgium and Spain (see Figure 1). Latvia spent about 1.3 percent of GDP on labor market programs in 2009 and 2010, which is a considerable increase compared to approximately 0.5 percent of GPD it spent on these programs between 2003 and 2008.

In 2010 almost two thirds of all LMP spending in EU countries went into the so called *support* or passive programs, which consist primarily of unemployment and early retirement benefits. Labor market *services* are mainly administrative expenses and other expenditures of the public employment services (PES) and, on average, absorb about 10 percent of the labor market expenditures. The remaining outlays are allocated to *measures*, or active labor market programs (ALMPs).[48] In 2010, Latvia allocated 40 percent of its LMP spending on ALMPs and slightly more than half on passive policies.

Latvia spends a relatively small amount on Public Employment Services (PES). Spending on PES is only about 3 percent of the total LMP expenditure, which represents only 0.04 percent of Latvia's GDP. This is lower than spending on PES in neighboring countries despite them having overall somewhat more favorable labor market conditions (Estonia spent 0.09 percent of GDP and Lithuania 0.08 percent of GDP in 2010).

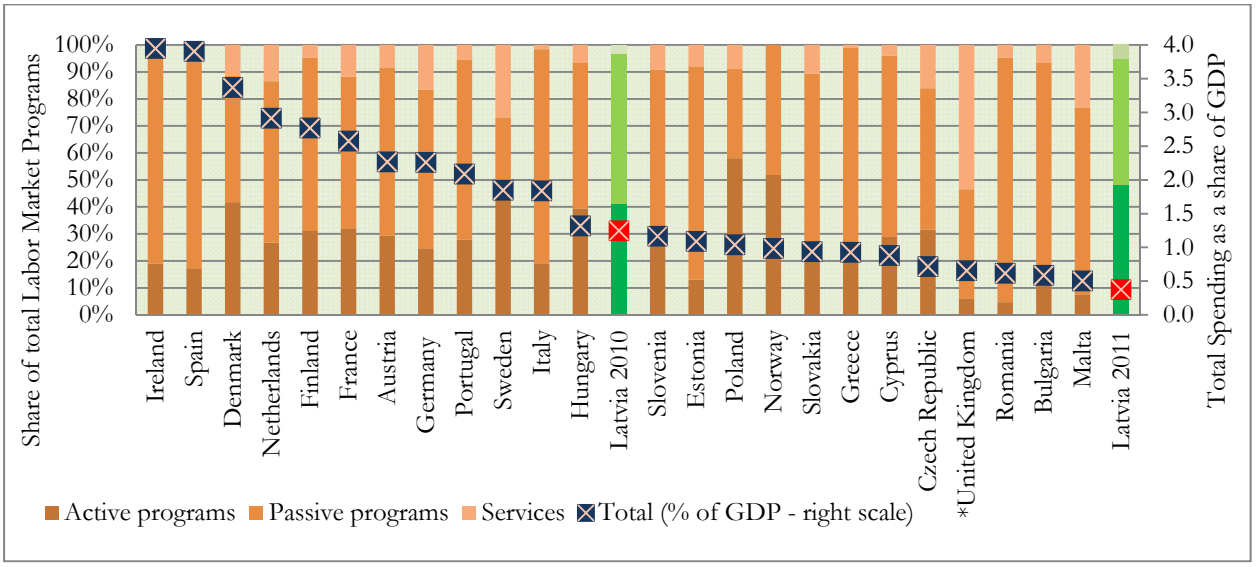
In 2011 overall spending on LMPs decreased drastically in Latvia, primarily due to passive programs. Spending on labor market programs decreased overall by about 40 percent in real terms from 2010 to 2011. While spending on ALMPs and PES together dropped by 29 percent, passive LMPs (essentially unemployment benefits) more than halved. Overall, this puts Latvia's spending on LMPs as the lowest in the EU if compared to what countries spent in 2010.[49]

[47] This section is mainly based on the data from Eurostat's Labor Market Policy database.

[48] Mostly short term and temporary, ALMPs are activities targeted to unemployed and can be divided into six main categories. i) training, ii) job rotation and job sharing, iii) employment incentives, iv) supported employment and rehabilitation, v) direct job creation and vi) start-up incentives.

[49] Unfortunately, 2011 LMP expenditure data is not yet available for many countries.

Figure 24: Spending on labor market policies, 2010



Note: * 2010 data on services is not available, 2009 expenditure was used.
Source: Eurostat, World Bank staff calculations

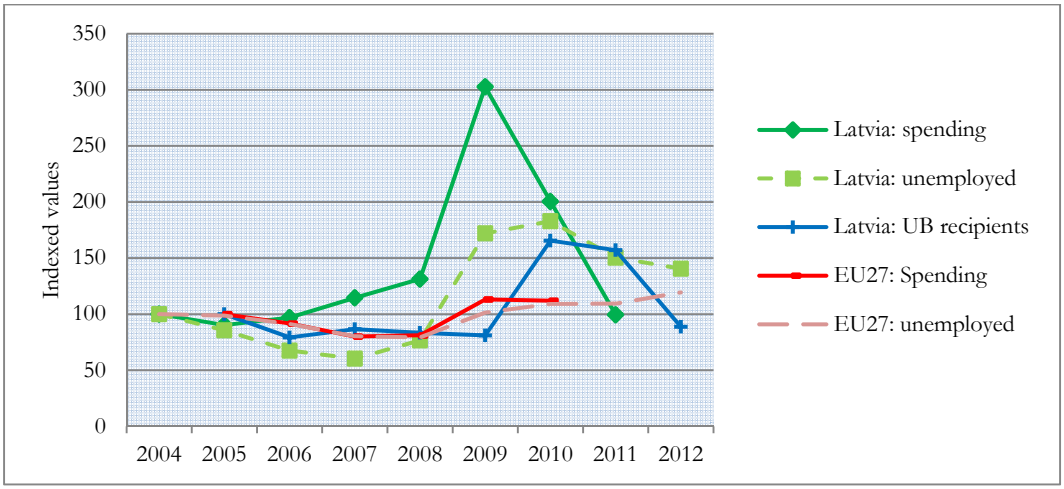
In response to the crisis spending on passive labor market programs increased significantly in Latvia. Because of the growing number of the unemployed claiming unemployed benefits and policy adjustments which prolonged duration of benefits,[50] real spending on income support for the unemployed increased radically in 2009 and remained at a significantly higher level for 2010 than pre-crisis levels (Figure 25).

In 2011 spending on unemployment benefits returned to values similar to those in 2007, despite prevailing high level of unemployment. Spending on unemployment benefits dropped significantly from 2010 (0.7 percent of GDP) to 2011 (0.32 percent of GDP), reaching levels slightly above the pre-crisis period. Spending dropped more rapidly than the number of unemployed, which remains higher than before the crisis (Figure 25). This indicates that many unemployed lost their benefits before they were able to find new (permanent) jobs, increasing pressures on other social benefits or program, such as the GMI program.

Latvia's spending on ALMPs, including PES, has remained below the EU average even during the crisis. In 2011, spending on ALMPs went down to 0.33 percent of GDP from 0.51 percent in 2010. Importantly, this further increased the gap between what Latvia spends on active programs per unemployed person (as a share of GDP per capita) and what EU12 or, especially EU15 countries spend, on average (Figure 26).

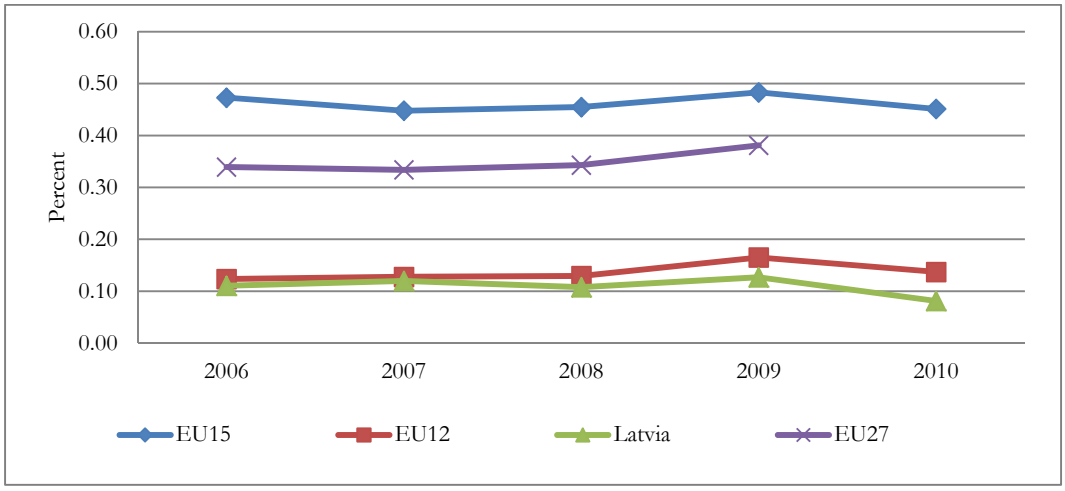
[50] From July 1, 2009 duration of unemployment benefit has been increased on a temporary basis (until December 31, 2011) to 9 months, regardless of the length of contribution history. However, since January 1, 2013 this change was made permanent.

Figure 25: Real spending on passive LMP, number of unemployed (index: 2004=100)



Note: The number of unemployed series is the annual average. Spending is constant 2005 prices. UB= unemployment benefit.
Source: Eurostat, World Bank staff calculations.

Figure 26: Spending on active measures per unemployed as a share of per capita GDP



Note: EU12 does not include Malta and Cyprus in 2004 and 2005 and Poland in 2004. 2011 values for EU12 and EU15 not available due to insufficient observations For the United Kingdom, 2010 data on Services is not available yet, therefore 2009 values were used.
Source: Eurostat, World Bank staff calculations.

Composition of spending on ALMPs varies greatly among EU countries, but training and employment incentives are predominant measures[51]. Though there is a great variation in how

[51] Not reported as active labor market policies, disabled claimants are currently served by *disability* and *unemployment* programs with effects on their inclusion in the labor market. These categories, collected by ESSPROS and not picked up in Eurostat's LMP database, include measures such as social rehabilitation (non-means-tested transfers in-kind and in cash) and vocational training, among others. Spending on rehabilitation and vocational training amounted about LVL 13 million in 2009.

ALMP spending is allocated on different types of active measures[52], on average, about one third of spending on ALMPs goes into training activities such as occupational training, re-training and improvement of qualifications of the unemployed or other non-formal education. Another third of ALMP spending goes to employment incentives, including subsidies for work places and similar measures (Figure 27).

Latvia allocated about 40 percent of ALMP spending to direct job creation programs in 2010 and 2011. Similarly to other EU countries, training and employment incentives have been predominantly used in Latvia, likely primarily financed by the European Structural Funds. But in 2009, with the introduction of the new public works program, composition of ALMPs changed significantly. In 2010 and 2011, 40 percent of ALMPs went to direct job creation, while the rest was split between training (about 40-50 percent) and employment incentives (10-20 percent). According to the Eurostat's Labor Market Policy database, Latvia spends very little on start-up incentives and there are currently no programs for rehabilitation or supported employment specifically aimed at integration of the disabled into the labor market reported in the.[53] However, a number of start-up programs administered by the Ministry of Economics as well as a range of general rehabilitation programs and wage subsidies for the disabled are not captured in this data source.

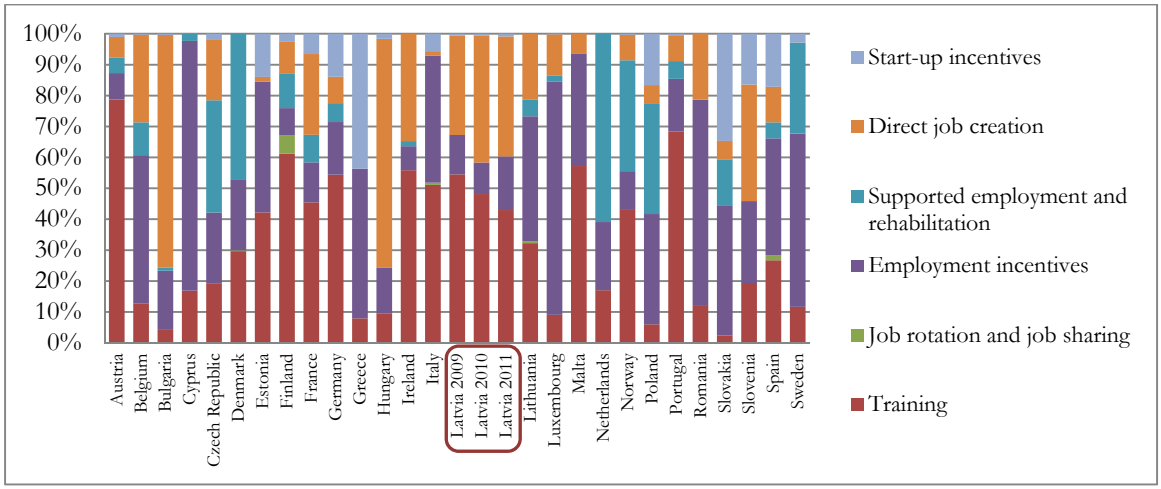
Between 2010 and 2011 spending on training decreased the most. In 2011, spending n training fell almost by 40 percent compared to 2010. Among other measures, only employment incentives have increased by almost 20 percent, primarily due to measures for target groups which more than doubled (Figure 28).

Within training, over time the focus shifted over time from occupational training and re-training to non-formal education. In 2003-2004 the main type of training offered was occupational training, but over time, non-formal education gained importance (Figure 29). In 2011 together these two subcategories amounted for 85 percent of the spending on training programs. Programs aimed specifically at at-risk groups and the disabled only lasted from 2004 to 2007, however, these might not take into account the disabled who participate in other programs provided outside of the PES. In 2010, several new training programs were introduced to facilitate training of persons with higher education and for lifelong learning. By 2011 spending on these programs has more than doubled.

[52] Eurostat's data includes the following categories: i) training, ii) job rotation and job sharing, iii) employment incentives, iv) supported employment and rehabilitation, v) direct job creation and vi) start-up incentives.

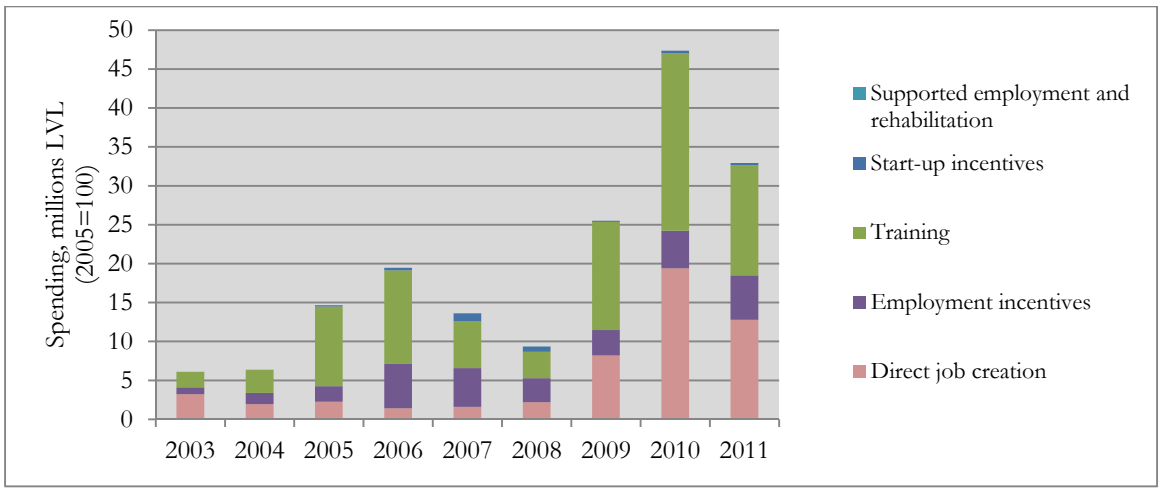
[53] While there are no programs for rehabilitation and supported employment targeted to the disabled in the Eurostat's LMP database, social protection programs aimed at the disabled are included in the analysis of European system of integrated social protection statistics (ESSPROS) data.

Figure 27: Composition of spending on Active Labor Market Policies, 2010



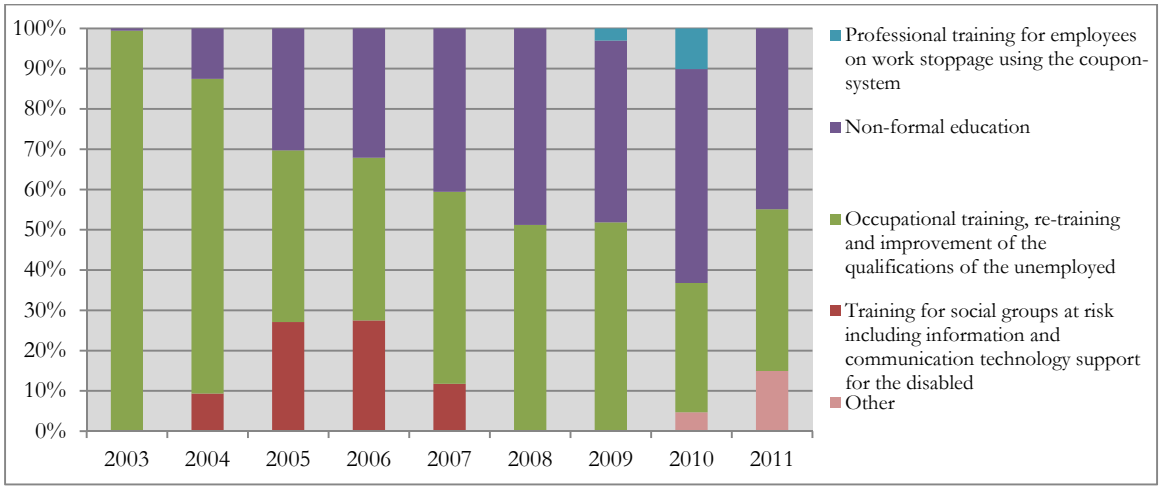
Source: Eurostat, World Bank staff calculations.

Figure 28: Real spending on ALMPs by type, 2003-2011



Source: Eurostat, World Bank staff calculations.

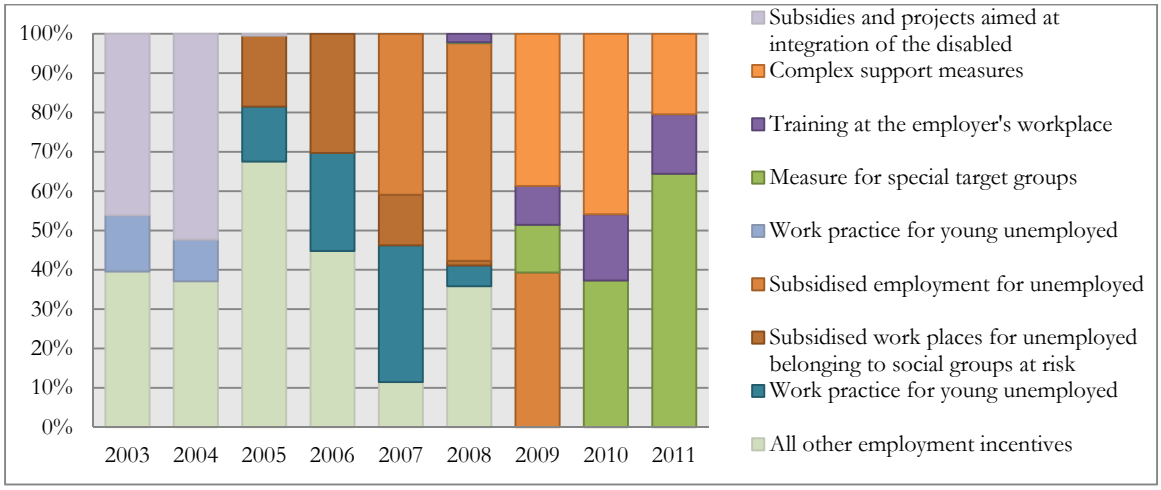
Figure 29: Composition of spending on training, 2003-2010



Note: Other includes several programs introduced in 2010 (Training vouchers for unemployed persons with a higher education, Lifelong learning measures for the employed, Training and practice of NVA assistant inspectors, Measures for improving mobility of unemployed with disabilities).
Source: Eurostat, World Bank staff calculations.

Within the employment incentives category, there is a great fragmentation of programs and little continuity. Before 2004, more than half of the employment incentives consisted of subsidies and projects aimed at the integration of the disabled. Between 2004 and 2007, the composition changed dramatically as employment incentives were predominantly characterized by subsidies and work practices for targeted unemployed. After 2007 some of these programs were replaced by training at the workplace and other targeted programs (Figure 30). High turnover of programs can be explained by the efforts of the State Employment Agency (SEA) to phase out ineffective programs and replace them with more effective ones.

Figure 30: Composition of spending on employment incentives, 2003-2011

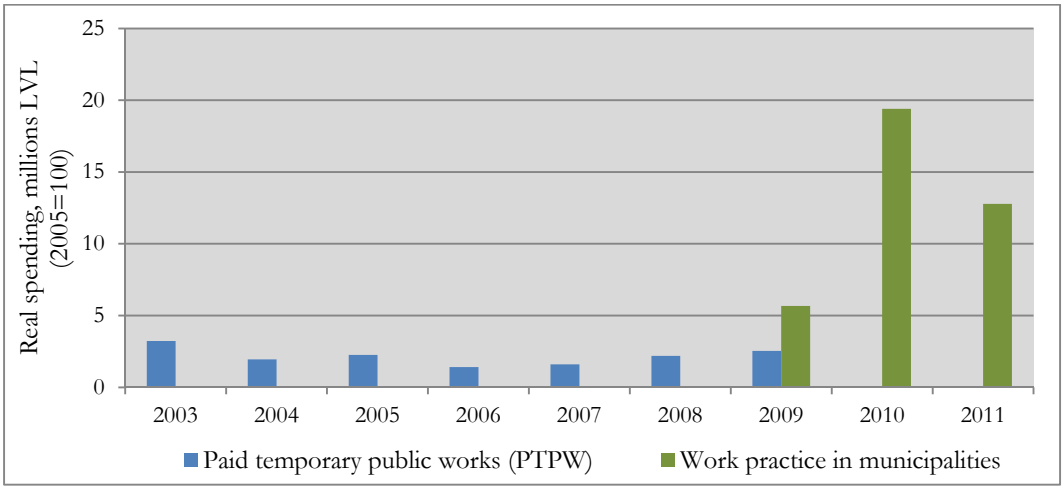


Source: Eurostat, World Bank staff calculations

In contrast, direct job creation programs consist mainly of one flagship programs (Figure 31). Until 2009, it was paid temporary public works (PTPW) and it was rather marginal in spending. In 2009, a new public works program "Workplaces with Stipends (WWS)" was introduced in response to the crisis and growing number of the unemployed, who were not eligible for the unemployment insurance benefits. This program replaced the previous PTPW program completely in 2009. Azam, Ferre and Ajwad (2012) find that the WWS program provided temporary employment opportunities and helped the unemployed mitigate the impact of the crisis.[54]Also, at 0.1 percent of GDP in 2011, the program is relatively inexpensive.

New programs fostering labor mobility can be expected to be implemented soon. For example, the State Employment Agency will commence to implement the regional mobility measure "Work in Latvia". It aims to provide financial support to the unemployed persons who are prepared to move closer to their jobs and work in Latvia. With this program, those in need who have found a job will receive financial support for transportation and accommodation costs.[55]

Figure 31: Real spending on direct job creation, 2003-2011



Source: Eurostat, World Bank staff calculations

Monitoring and evaluation approach used in the roll-out of the WWS program is merited for other labor market interventions. Given high fragmentation and little continuity in many active measures, it would be important to adopt a similar robust evaluation approach for other labor market interventions. This would allow for more evidence-based policy making in the area of labor market programs. Ultimately, resources spent on active measures can be reallocated to programs which tailor better to labor market conditions and profile of the unemployed.

[54] WWS's stipend mitigated the impact of job loss and in the short term, raised participating household incomes by 37 percent relative to similar households not benefiting from the program. See Azam, Ferre and Ajwad (2012).

[55] Based on announcement on the website of the Ministry of Welfare - http://www.lm.gov.lv/news/id/4206 .

8. Key findings and recommendations

In this note we have looked at how much is spent on social assistance and employment programs in Latvia. Additionally, we assessed to what extent social assistance transfers cover the poor and how efficient are they in channeling resources to those in need. Some of the key findings are the following:

- Both spending on social protection and social assistance are very moderate in Latvia compared to other EU countries.
- During the global economic crisis, Latvia's automatic stabilizers needed policy adjustments in order to operate causing a delay. Central government co-financing of the housing and the GMI benefits proved central to the response.
- The majority of social benefits in Latvia are not income or means-targeted, and as a result, resources for programs targeting the poor and vulnerable are underprovided.
- The GMI program is very well targeted, but covers too few of the poor and provides limited income support, as a result it has very little impact on poverty. Most of the GMI beneficiaries remain at risk of poverty.
- Recent changes to the GMI program (benefit cuts, in particular) further undermine the coverage of the program and adequacy of the minimum income support. Full decentralization of financing back to the municipalities assuming full financial responsibility for both the housing and GMI benefits jeopardizes the role these benefits can play as a safety net in future crisis and could exacerbate inequity.
- Latvia leveraged labor market policies well during the crisis to provide support to the unemployed, both via extending the duration of the unemployment benefits and introducing a new public works program (Workplaces with Stipends). The program has helped the unemployed cope with the crisis.
- However, spending on labor market programs significantly decreased in 2011 while the number of unemployed continues to be well above pre-crisis levels. The gap between the unemployed and those receiving the unemployment benefit has widened significantly.
- Spending on active labor market programs per unemployed was lower than EU average even at its peak and decreased further due to recent cuts in spending.
- High turnover of programs, particular employment incentives, is driven by the efforts of the State Employment Agency to replace ineffective programs with more effective and cost-efficient ones.
- There is room to improve efficiency and equity of spending on social assistance by increasing coverage of the poor and adequacy of provided income support through means-tested programs.

As Latvia's public finances improve, there is an opportunity to provide more meaningful protection to the poor and vulnerable while further improving efficiency of spending. Based on the findings above, key recommendations are as follows:

- **Despite eased fiscal pressures, lessons from the crisis caution against expanding non-targeted programs**. Some recent reforms seem to be following pre-crisis trend of increasing universal programs targeted at families with children at the expense of targeted programs. These policy changes have to be carefully weighed against a goal to increase efficiency as well as equity of social protection spending to be better prepared for future crises.

- **While spending on social assistance is low, there is room to improve efficiency and equity by increasing coverage of the poor and adequacy of provided income support through means-tested programs**. While the share of spending on means-tested programs has increased in recent years due to the expansion in the GMI program and some measures taken to curtail family benefits expenditure, there still is room to reallocate spending away from programs that are not targeted to the poor.

- **Given low coverage of the poor and low generosity, some, if not all, of the savings would need to be channeled to increase coverage and adequacy of the minimum income support.** Cutting non means-tested programs across the board could hurt the poor who rely on these transfers, so instead they could be means-tested with a relatively generous cut-off that includes those in need, but exclude the rich who do not need these transfers.

- **In order for the GMI program to provide adequate and equitable support to the needy in Latvia, central government co-financing is key**. Experience in the last crisis has shown that a safety net relying on local financing cannot respond adequately in the face of a serious economic crisis. Furthermore, even in good times, local financing of last-resort social assistance is likely to lead to significant inequity in treatment of the poor and needy across municipalities due to different revenue capacity and more demands on budgets in poorer municipalities.

- **The experience with the public works program during in the crisis could guide future policy making in the area of labor market policy**. Continued high unemployment despite general economic recovery underway calls for a better evaluation of effectiveness of labor market policies and developing appropriate programs and approaches based on constrains faced by the unemployed. Further monitoring and evaluating of labor market policies will contribute to developing targeted measures and programs to facilitate employment of the unemployed.

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Annex 1: Comparative tables of performance of social assistance transfers in the EU countries

Table A1.1: Coverage of overall social assistance, 2008

Coverage (share of direct and indirect beneficiaries in percent)

Country	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
Austria	55.8	75.5	64.4	53.2	48.3	37.7	75.4	50.8
Belgium	53.2	63.1	52.0	56.7	55.1	39.2	63.7	50.7
Bulgaria	37.6	55.0	42.7	39.7	32.0	18.7	53.3	32.8
Cyprus	69.6	64.7	73.2	70.6	70.2	69.0	64.9	70.7
Czech Republic	29.7	62.2	32.6	24.6	17.2	12.1	72.7	23.7
Denmark	60.8	73.6	66.2	63.9	60.2	40.3	73.6	57.7
Estonia	53.2	60.8	50.1	54.9	52.4	47.8	58.1	51.7
Finland	57.0	80.2	56.7	58.0	53.8	36.2	79.6	51.2
France	55.4	89.6	66.6	51.9	37.0	31.9	89.7	46.9
Germany	51.7	65.1	54.9	52.4	47.9	38.0	65.0	48.1
Greece	20.5	26.5	27.3	18.5	16.9	13.1	26.6	18.8
Hungary	56.8	88.0	67.0	54.2	42.4	32.5	87.3	48.4
Iceland	65.6	78.2	75.0	72.7	63.5	38.7	77.6	63.2
Ireland	78.1	94.3	89.0	81.7	69.4	56.0	92.4	72.2
Italy	38.9	47.4	50.5	43.8	33.5	19.3	47.3	36.7
Latvia	57.3	57.2	57.5	61.3	60.3	50.3	55.6	58.0
Lithuania	49.9	64.6	50.7	48.4	46.3	39.6	63.2	45.6
Luxemburg	61.0	89.8	69.4	60.2	47.6	37.8	88.5	52.7
Malta	82.3	94.8	92.0	87.6	75.7	61.4	94.7	79.2
Netherlands	61.5	87.8	68.6	62.1	48.3	40.9	88.6	55.8
Norway	58.2	77.2	62.3	60.7	51.7	39.2	79.4	54.0
Poland	30.5	64.2	39.7	24.7	15.3	8.4	64.3	22.0
Portugal	44.5	55.8	51.4	46.7	37.1	31.7	56.0	41.6
Romania	62.3	84.7	76.6	62.6	51.8	35.5	83.2	55.0
Slovakia	59.0	77.8	57.2	57.3	57.5	45.5	79.2	55.9
Slovenia	58.3	69.2	65.7	63.0	56.7	37.1	70.2	55.9
Spain	12.2	15.1	11.6	13.0	11.1	10.3	15.0	11.5
Sweden	56.8	79.3	59.8	60.0	53.2	31.6	78.9	51.2
United Kingdom	56.2	81.7	59.7	56.5	46.4	36.8	76.2	48.7

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers. *Source:* EU-SILC 2009, World Bank staff calculations.

Table A1.2: Targeting of overall social assistance, 2008

Country	Targeting (percent of all benefits)							
	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
Austria	100	35.4	22.7	17.7	13.9	10.4	35.7	64.3
Belgium	100	34.8	20.1	18.2	15.3	11.6	34.3	65.7
Bulgaria	100	29.4	23.8	17.6	17.2	12.0	34.2	65.8
Cyprus	100	27.6	18.7	19.0	15.0	19.7	28.3	71.7
Czech Republic	100	53.7	18.7	12.0	8.1	7.4	40.0	60.0
Denmark	100	51.0	21.9	11.9	9.5	5.8	50.7	49.3
Estonia	100	29.8	18.6	16.7	17.6	17.4	33.6	66.4
Finland	100	50.7	19.0	13.5	10.1	6.7	51.3	48.7
France	100	51.9	18.9	13.4	8.1	7.8	51.7	48.3
Germany	100	40.9	19.2	16.1	13.1	10.7	42.2	57.8
Greece	100	33.9	26.4	16.9	13.1	9.8	35.3	64.7
Hungary	100	43.9	21.6	14.6	10.3	9.5	46.4	53.6
Iceland	100	40.5	23.4	17.7	12.3	6.1	35.2	64.8
Ireland	100	47.3	21.6	13.5	10.2	7.4	59.9	40.1
Italy	100	30.0	24.8	20.1	14.4	10.7	30.4	69.6
Latvia	100	18.5	15.2	20.7	18.1	27.5	23.2	76.8
Lithuania	100	37.8	19.6	14.1	8.4	20.1	47.5	52.5
Luxemburg	100	37.8	21.1	18.5	12.5	10.2	41.4	58.6
Malta	100	46.3	20.6	14.5	10.8	7.8	46.4	53.6
Netherlands	100	65.7	14.7	9.2	5.7	4.7	62.7	37.3
Norway	100	47.6	20.7	14.7	9.7	7.4	43.6	56.4
Poland	100	51.8	21.0	12.2	9.5	5.6	51.7	48.3
Portugal	100	43.5	20.5	15.2	11.3	9.5	43.7	56.3
Romania	100	37.5	24.5	17.3	12.3	8.3	45.4	54.6
Slovakia	100	45.8	16.0	14.3	13.2	10.7	36.2	63.8
Slovenia	100	43.4	23.8	15.6	10.5	6.8	39.7	60.3
Spain	100	23.4	15.5	23.4	16.4	21.3	23.7	76.3
Sweden	100	48.2	21.4	14.4	10.3	5.7	48.5	51.5
United Kingdom	100	60.3	19.3	9.3	6.5	4.6	68.8	31.2

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers. *Source:* EU-SILC 2009, World Bank staff calculations.

Table A1.3: Generosity of overall social assistance, 2008

Generosity (benefits as a percent of post-transfer disposable income, beneficiary households)

Country	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
Austria	12.3	28.8	15.4	11.5	8.0	4.8	28.7	9.4
Belgium	9.9	28.8	13.0	8.6	6.0	4.4	29.0	7.4
Bulgaria	7.0	16.1	9.0	5.4	5.0	3.7	15.5	5.4
Cyprus	5.3	15.5	6.8	5.5	3.5	2.9	15.5	4.2
Czech Republic	13.0	25.9	12.2	8.7	6.8	4.9	30.0	9.4
Denmark	10.6	36.6	12.0	6.2	4.4	2.7	36.8	6.1
Estonia	9.9	29.5	14.5	9.2	7.5	4.8	28.2	7.5
Finland	11.3	33.9	13.6	7.9	5.0	3.1	33.6	6.7
France	11.5	32.8	10.6	7.8	5.5	3.6	33.0	6.7
Germany	10.8	33.2	13.4	9.1	6.3	3.9	32.5	7.3
Greece	8.8	23.1	11.2	8.4	5.5	3.1	22.3	6.6
Hungary	15.3	38.5	16.5	10.9	8.1	6.5	37.0	10.1
Iceland	6.7	20.4	8.8	5.5	3.5	1.7	22.4	4.9
Ireland	14.2	52.7	17.7	9.8	6.5	3.7	40.9	7.2
Italy	4.7	11.6	5.7	4.0	2.9	2.3	11.5	3.7
Latvia	7.6	20.7	9.5	8.4	5.5	5.6	16.5	6.5
Lithuania	10.3	34.3	14.7	8.5	4.1	5.6	32.6	6.4
Luxemburg	13.8	34.2	16.4	12.5	8.7	5.2	31.9	9.8
Malta	4.9	19.7	5.9	3.5	2.4	1.3	19.6	2.9
Netherlands	11.7	43.0	9.3	5.5	3.5	2.1	48.7	5.1
Norway	9.5	28.1	11.1	6.8	4.4	2.8	31.3	6.2
Poland	10.4	21.9	9.1	6.5	6.1	3.7	22.0	6.7
Portugal	5.5	21.8	7.0	4.2	2.9	1.7	21.7	3.5
Romania	7.2	26.4	9.5	5.9	3.8	2.2	21.7	4.6
Slovakia	5.6	18.8	5.8	4.3	3.2	2.1	25.3	3.9
Slovenia	9.7	29.3	12.2	6.9	4.3	3.1	31.9	6.6
Spain	7.3	18.9	8.3	8.4	5.2	4.6	19.0	6.2
Sweden	13.3	35.7	15.8	9.1	6.1	3.7	35.4	8.3
United Kingdom	15.6	60.8	18.5	7.7	5.0	2.5	51.2	6.2

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers. *Source:* EU-SILC 2009, World Bank staff calculations.

Table A1.4: Coverage of social exclusion benefits, 2008

Coverage (share of beneficiaries in percent)

Country	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
Austria	4.4	13.4	3.5	2.1	2.0	1.3	13.2	2.2
Belgium	1.5	7.2	0.3	0.1	0.0	0.0	7.3	0.1
Bulgaria	7.3	21.8	8.2	2.9	2.7	0.6	20.5	3.2
Cyprus	0.4	1.5	0.2	0.1	0.0	0.1	1.4	0.1
Czech Republic	2.1	8.3	0.6	0.4	0.8	0.3	13.2	0.5
Denmark	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Estonia	2.1	2.2	1.8	2.4	1.8	2.0	2.3	2.0
Finland	7.0	25.2	4.8	2.4	2.1	0.6	24.7	2.5
France	7.8	23.0	5.1	3.9	2.4	4.5	23.1	4.0
Germany	4.8	18.2	2.8	1.5	0.7	0.6	17.6	1.4
Greece	4.7	9.1	5.6	4.3	3.6	0.9	8.9	3.5
Hungary	7.3	21.9	6.3	4.4	2.6	1.2	20.9	3.5
Iceland	2.0	6.5	1.2	0.8	0.8	0.4	7.3	0.9
Ireland	6.3	15.1	10.8	3.8	1.3	0.4	13.0	3.5
Italy	1.0	2.3	1.0	0.8	0.3	0.4	2.3	0.6
Latvia	6.9	12.1	7.9	5.1	7.0	2.3	10.9	5.3
Lithuania	6.3	15.8	7.3	3.6	2.8	1.8	13.9	3.8
Luxemburg	5.7	23.1	4.5	0.7	0.2	0.1	21.9	0.9
Malta	37.5	49.1	50.3	37.2	29.2	21.9	49.2	34.6
Netherlands	22.9	43.6	24.3	20.1	13.9	12.7	46.6	18.0
Norway	3.9	13.8	2.4	1.3	1.4	0.4	15.4	1.6
Poland	4.6	16.9	2.7	1.7	0.9	0.6	16.9	1.5
Portugal	3.5	13.3	2.8	0.4	0.5	0.3	13.2	1.0
Romania	26.7	52.9	36.5	26.0	14.3	3.8	50.3	18.5
Slovakia	4.8	17.8	2.5	1.8	1.2	0.6	24.6	1.7
Slovenia	9.5	23.6	10.8	6.2	4.6	2.3	25.8	6.1
Spain	1.1	2.2	1.0	0.8	0.8	0.7	2.2	0.8
Sweden	2.8	11.4	1.1	0.9	0.4	0.1	11.2	0.6
United Kingdom	14.2	48.4	16.1	4.7	1.3	0.7	41.6	4.0

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers. *Source:* EU-SILC 2009, World Bank staff calculations.

Table A1.5: Targeting of social exclusion benefits, 2008

Country	Targeting (percent of all benefits)							
	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
Austria	100	74.1	4.5	11.9	2.4	7.0	74.1	25.9
Belgium	100	95.3	2.7	2.1	0.0	0.0	95.3	4.7
Bulgaria	100	75.5	16.1	4.8	3.1	0.6	79.9	20.1
Cyprus	100	69.7	13.3	6.8	6.1	4.2	69.7	30.3
Czech Republic	100	94.2	2.6	0.7	1.3	1.3	93.5	6.5
Denmark	100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estonia	100	30.9	13.0	20.7	13.2	22.2	34.8	65.2
Finland	100	87.0	6.7	2.5	2.7	1.0	87.0	13.0
France	100	59.2	8.4	12.7	5.0	14.7	59.2	40.8
Germany	100	82.2	9.0	4.7	2.1	2.0	83.3	16.7
Greece	100	46.0	25.6	15.0	10.6	2.9	47.2	52.8
Hungary	100	68.5	14.6	7.9	7.0	2.1	68.9	31.1
Iceland	100	75.9	10.1	5.0	3.6	5.4	72.6	27.4
Ireland	100	55.2	26.3	4.3	5.7	8.5	64.1	35.9
Italy	100	35.7	18.6	25.2	10.7	9.9	35.7	64.3
Latvia	100	32.6	25.9	11.5	20.8	9.2	41.4	58.6
Lithuania	100	69.0	13.5	7.4	5.2	4.8	69.3	30.7
Luxemburg	100	86.0	9.9	1.3	0.6	2.3	90.5	9.5
Malta	100	65.1	18.0	9.4	5.5	2.0	65.2	34.8
Netherlands	100	88.2	6.2	2.9	1.6	1.2	87.2	12.8
Norway	100	81.9	9.3	2.7	4.7	1.3	78.4	21.6
Poland	100	81.7	7.6	5.3	3.5	1.9	81.7	18.3
Portugal	100	89.0	8.3	1.0	0.9	0.8	89.0	11.0
Romania	100	60.1	20.7	11.4	5.2	2.6	67.2	32.8
Slovakia	100	89.8	4.2	2.6	2.2	1.2	86.0	14.0
Slovenia	100	71.0	13.5	8.3	4.8	2.5	68.7	31.3
Spain	100	35.7	21.9	10.4	15.1	17.0	35.7	64.3
Sweden	100	95.2	1.6	1.9	1.0	0.3	95.2	4.8
United Kingdom	100	78.7	15.5	3.7	1.4	0.7	86.4	13.6

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers. *Source:* EU-SILC 2009, World Bank staff calculations.

Table A1.6: Generosity of social exclusion benefits, 2008

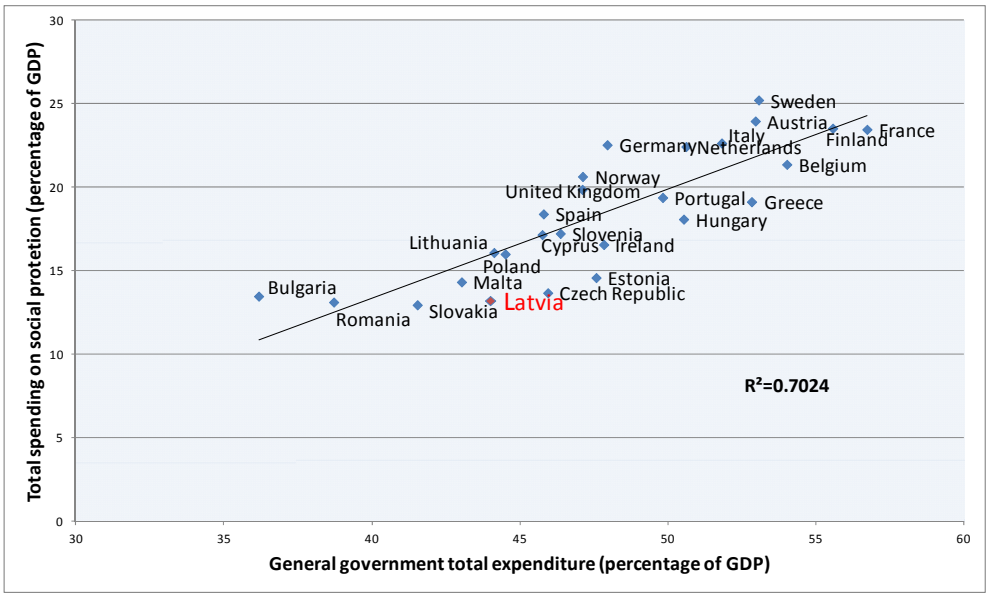
Generosity (benefits as a percent of post-transfer disposable income, beneficiary households)

Country	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
Austria	5.9	10.1	1.7	5.3	1.0	3.0	10.1	2.7
Belgium	52.7	57.2	18.3	24.0	n.a.	n.a.	57.2	20.4
Bulgaria	7.4	14.4	4.5	2.7	1.4	0.7	13.4	2.7
Cyprus	28.6	33.9	26.8	22.7	24.4	10.5	33.9	21.0
Czech Republic	17.2	27.4	5.3	1.8	1.3	2.2	28.7	2.5
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estonia	4.3	13.2	4.4	4.4	2.7	2.7	11.6	3.2
Finland	12.7	18.6	5.4	3.2	3.2	3.2	18.6	4.1
France	12.2	22.8	7.8	12.0	6.1	5.5	22.9	7.3
Germany	27.9	36.9	17.3	13.5	9.6	7.5	36.8	12.7
Greece	16.2	30.6	17.6	11.6	8.2	4.5	29.9	11.5
Hungary	6.7	11.5	5.0	3.0	3.8	1.3	11.0	3.6
Iceland	7.3	11.0	5.3	3.1	1.9	4.0	11.6	3.7
Ireland	3.3	5.3	2.4	0.9	2.4	6.6	4.5	2.3
Italy	22.0	28.3	19.8	26.2	19.3	12.0	28.3	19.6
Latvia	4.3	9.0	6.0	3.1	3.0	2.0	8.1	3.3
Lithuania	12.3	29.6	7.2	5.8	4.1	3.4	26.4	5.6
Luxemburg	26.6	32.5	12.7	8.0	8.6	22.0	30.6	11.9
Malta	3.0	14.0	2.5	1.4	0.8	0.3	14.0	1.2
Netherlands	13.9	48.4	4.7	2.2	1.4	0.7	52.3	2.3
Norway	14.8	21.8	8.6	4.3	5.7	2.9	23.3	6.4
Poland	9.3	14.1	4.7	4.0	3.7	1.9	14.1	3.7
Portugal	27.0	38.1	12.7	6.2	3.5	2.7	38.1	8.0
Romania	4.5	13.9	3.4	1.9	1.2	1.9	11.0	2.0
Slovakia	18.0	29.2	5.1	3.8	3.7	3.2	31.6	4.9
Slovenia	8.7	18.1	5.0	4.2	2.7	2.1	19.1	3.9
Spain	7.6	17.4	11.0	4.9	5.5	4.0	17.4	5.8
Sweden	25.3	34.5	3.5	4.2	4.7	3.8	34.5	4.0
United Kingdom	18.6	25.9	11.0	6.8	6.5	4.2	23.5	8.0

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers. *Source:* EU-SILC 2009, World Bank staff calculations.

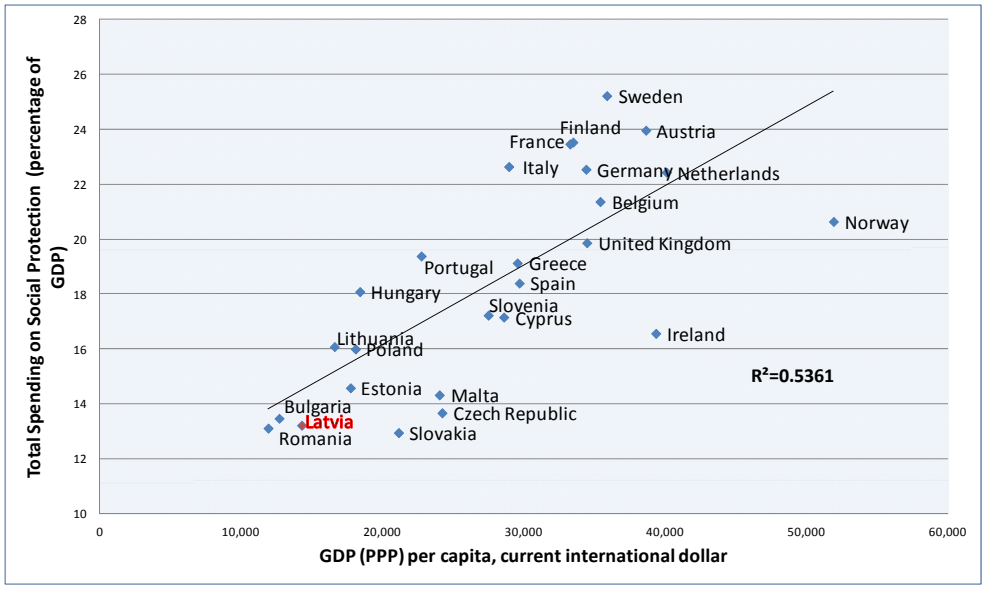
Annex 2: Additional figures on social protection spending

Figure A2.1: Total spending on social protection and government size, 2009



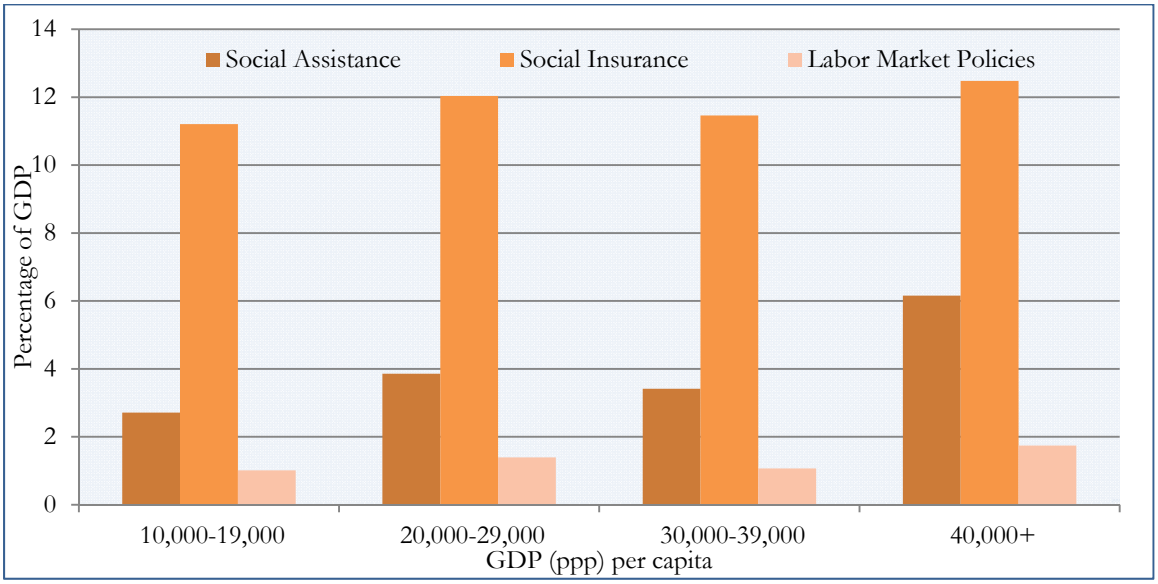
Note: Excluding Denmark, Iceland and Luxembourg. *Source*: ESSPROS 2009 data, World Bank staff calculations.

Figure A2.2: Total spending on social protection and GDP (PPP) per capita, 2009



Note: Excluding Iceland. *Source*: ESSPROS 2009 data, World Bank staff calculations.

Figure A2.3: Spending on social protection according to GDP (PPP) per capita

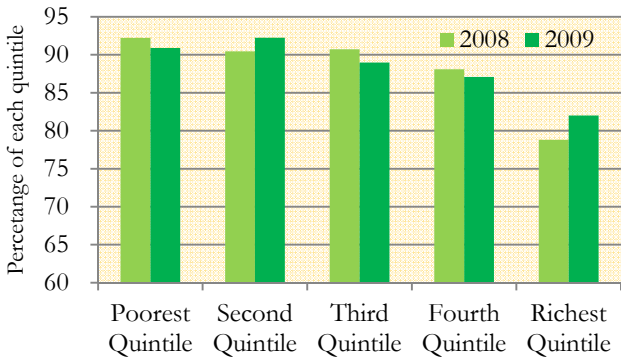


Note: Iceland not included. Countries were grouped according to their current GDP/capita (PPP) – finding four groups: i)countries with per capita income between USD 10,000 and USD 19,999 are: Hungary, Poland, Estonia, Lithuania, Latvia, Bulgaria, Romania; ii)countries with per capita income between USD 20,000 and USD 29,999 are: Spain, Greece, Italy, Cyprus, Slovenia, Czech Republic, Malta, Portugal, Slovakia, iii)countries with per capita income between USD 30,000 and USD 39,999 are: Ireland, Austria, Sweden, Denmark, Belgium, the United Kingdom, Germany, Finland, France, and iv)countries with per capita income above USD 40,000 are: countries included here are: Luxembourg, Norway and the Netherlands. *Source*: ESSPROS data, IMF WEO 2011, World Bank staff calculations.

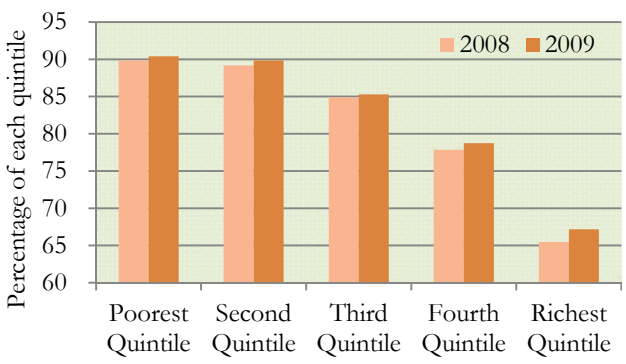
Annex 3: Additional figures on performance of social assistance transfers

Figure A3.1: Coverage of the poorest quintile by social protection programs, 2008 and 2009

Panel A: Latvia

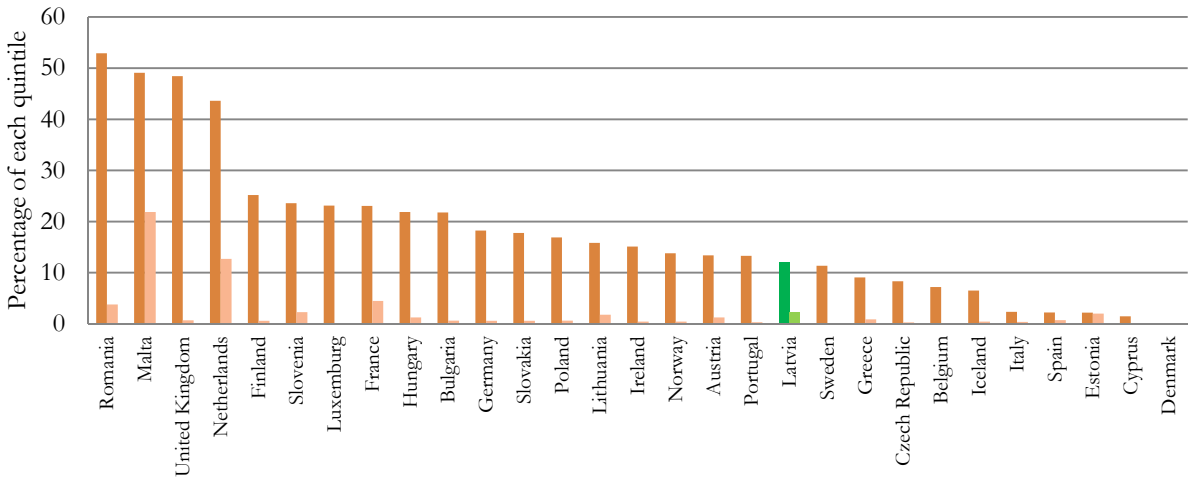


Panel B: All other EU countries



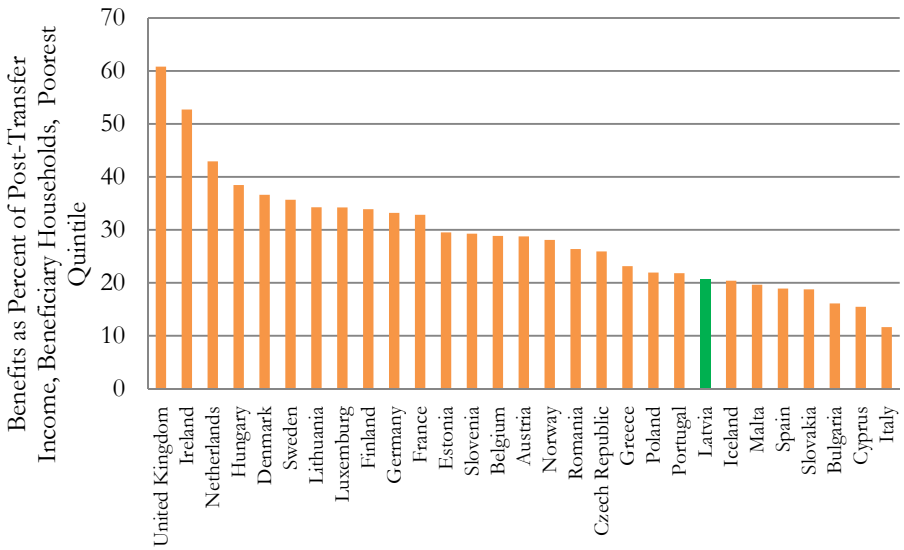
Source: EU-SILC 2009 and 2009, World Bank staff calculations.

Figure A3.2: Coverage of the poorest and richest quintile by programs targeting social exclusion, 2009



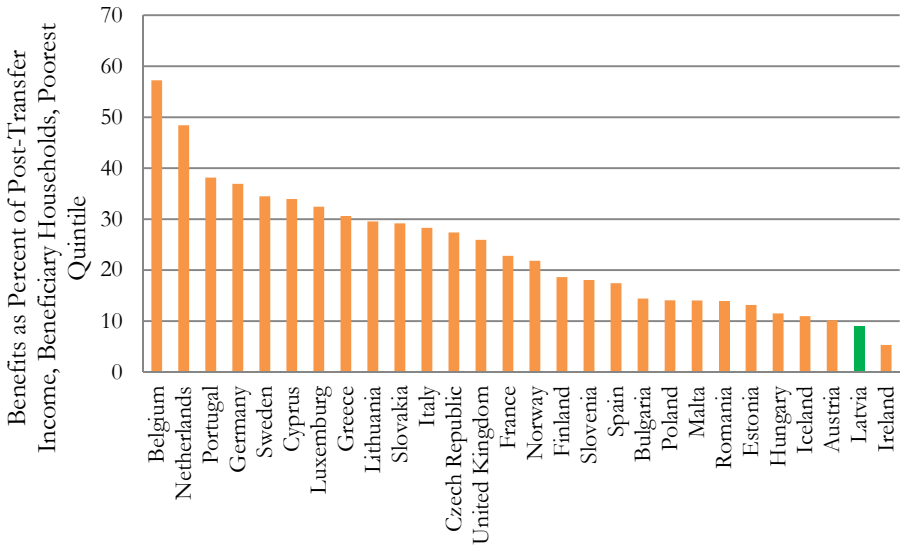
Source: EU-SILC 2009, World Bank staff calculations.

Figure A3.3: Generosity of overall social assistance, benefits as percent of post-transfer disposable income, beneficiary household, poorest quintile, 2009



Source: EU-SILC 2010, World Bank staff calculations.

Figure A3.4: Generosity of social exclusion programs, benefits as percent of post-transfer disposable income, beneficiary household, poorest quintile, 2009



Source: EU-SILC 2010, World Bank staff calculations.

Annex 4: Program level performance indicators for social protection programs based on Latvia SILC (2011)

Table A4.1: Coverage of social protection programs, 2010

Coverage (share of direct and indirect beneficiaries in percent)

	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
All social protection	**88.5**	**87.6**	**93.1**	**89.8**	**88.3**	**83.6**	**88.3**	**88.6**
All social insurance	**62.4**	**45.2**	**72.2**	**67.5**	**68.6**	**58.7**	**48.0**	**66.6**
Old age pension, incl. supplements, state social maintenance benefit	35.6	18.8	51.1	44.4	36.3	27.4	20.5	39.9
Pension from other country	1.2	0.5	0.5	1.1	1.5	2.1	0.5	1.3
Compensation at retirement	1.1	0.1	0.9	1.6	2.3	0.7	0.1	1.4
Other type of pension	0.9	0.0	0.6	0.8	1.2	2.0	0.2	1.1
Survivor benefit	4.3	6.2	4.0	5.4	4.0	1.7	6.2	3.7
Sickness benefit	18.9	8.7	13.0	19.2	27.5	26.3	10.0	21.5
State disability pension	8.9	9.7	8.4	9.8	9.7	6.8	9.8	8.6
State social maintenance benefit for disabled	2.9	5.0	4.1	1.7	2.5	1.2	4.7	2.4
Other benefits for disabled & injured people < retirement	2.3	1.2	1.5	3.5	3.6	1.9	1.3	2.6
Maternity + paternity benefits	3.8	0.9	2.5	2.8	5.0	7.7	1.3	4.5
Parental benefit	6.2	3.4	3.3	4.2	8.8	11.5	3.6	7.0
All labor market programs	**23.3**	**29.5**	**20.6**	**20.3**	**27.0**	**18.9**	**28.7**	**21.7**
Unemployment benefit	21.6	26.2	18.9	19.7	25.5	17.6	25.5	20.4
Other related unemployment benefit	4.6	5.4	4.1	3.6	3.9	6.0	5.2	4.4
All social assistance	**56.2**	**69.6**	**54.5**	**48.5**	**56.7**	**51.7**	**69.4**	**52.5**
State family benefit, incl. supplements for disabled	46.4	56.1	41.0	39.9	50.5	44.8	55.6	43.8
Child care benefit, incl. for disabled	11.1	15.5	7.5	7.1	12.6	12.7	15.2	9.9
Child birth benefit, state and municipal	4.8	4.1	4.0	2.9	6.2	6.9	4.4	4.9
Other family related benefits, incl. foster and alimony	3.5	7.8	3.3	2.9	1.8	1.6	7.5	2.3
Municipal GMI benefit	3.1	13.7	1.2	0.2	0.2	0.0	12.6	0.4
Other municipal benefits, incl. funeral and emergency	5.1	12.2	6.1	4.0	2.1	1.1	12.3	3.1
Other sickness benefit, incl. municipal allowance for medical services	2.8	3.7	2.6	2.7	2.8	2.1	4.0	2.4
Housing allowances	7.6	23.7	9.4	3.5	1.2	0.2	22.9	3.2
Education-related allowances	5.4	6.9	5.8	4.8	6.1	3.2	7.0	4.9

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers. *Source:* Latvia SILC 2011, World Bank staff calculations.

Table A4.2: Targeting of social protection programs, 2010

	Targeting (percent of all benefits)							
	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
All social protection	**100.0**	**10.5**	**23.7**	**22.5**	**20.1**	**23.2**	**12.6**	**87.4**
All social insurance	**100.0**	**7.3**	**25.4**	**23.7**	**20.0**	**23.5**	**9.3**	**90.7**
Old age pension, incl. supplements, state social maintenance benefit	100.0	6.1	30.2	26.7	18.6	18.3	8.1	91.9
Pension from other country	100.0	3.1	4.4	11.8	27.9	52.7	3.8	96.2
Compensation at retirement	100.0	0.5	3.9	26.1	46.4	23.2	0.6	99.4
Other type of pension	100.0	0.8	13.8	14.7	26.1	44.7	5.1	94.9
Survivor benefit	100.0	25.7	18.2	23.5	24.1	8.5	28.1	71.9
Sickness benefit	100.0	5.0	10.2	14.2	29.8	40.9	6.6	93.4
State disability pension	100.0	21.9	18.8	20.3	20.8	18.3	24.5	75.5
State social maintenance benefit for disabled	100.0	30.3	28.1	14.5	18.6	8.5	32.7	67.3
Other benefits for disabled & injured people < retirement	100.0	4.0	10.4	20.6	31.4	33.6	6.4	93.6
Maternity + paternity benefits	100.0	1.7	5.2	9.0	18.3	65.8	2.5	97.5
Parental benefit	100.0	4.9	4.9	7.4	20.2	62.7	6.0	94.0
All labor market programs	**100.0**	**14.0**	**11.5**	**20.0**	**26.7**	**27.9**	**15.3**	**84.7**
Unemployment benefit	100.0	14.5	11.6	20.8	29.0	24.1	16.0	84.0
Other related unemployment benefit	100.0	10.4	11.0	14.7	11.8	52.1	10.9	89.1
All social assistance	**100.0**	**36.3**	**16.3**	**13.1**	**16.4**	**17.9**	**39.6**	**60.4**
State family benefit, incl. supplements for disabled	100.0	32.2	15.5	15.7	19.0	17.6	35.3	64.7
Child care benefit, incl. for disabled	100.0	33.0	14.8	12.2	18.5	21.5	36.8	63.2
Child birth benefit, state and municipal	100.0	15.7	14.7	12.2	24.3	33.1	18.5	81.5
Other family related benefits, incl. foster and alimony	100.0	55.6	22.1	9.7	7.6	5.0	60.0	40.0
Municipal GMI benefit	100.0	91.3	7.1	0.5	1.1	0.0	94.4	5.6
Other municipal benefits, incl. funeral and emergency	100.0	33.2	25.4	27.9	9.3	4.3	36.8	63.2
Other sickness benefit, incl. municipal allowance for medical services	100.0	10.6	4.5	12.8	28.1	44.0	13.2	86.8
Housing allowances	100.0	60.8	29.6	7.4	1.5	0.7	65.2	34.8
Education-related allowances	100.0	23.5	22.3	13.7	20.4	20.0	25.5	74.5

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers.

Source: Latvia SILC 2011, World Bank staff calculations.

Table A4.3: Generosity of social protection programs, 2010

Generosity (benefits as a percent of post-transfer disposable income, beneficiary households)

	Total	Q1	Q2	Q3	Q4	Q5	Poor	Non-Poor
All social protection	**36.7**	**57.7**	**61.9**	**47.8**	**32.2**	**21.9**	**58.0**	**34.9**
All social insurance	**42.0**	**58.6**	**69.6**	**55.4**	**34.7**	**26.5**	**58.9**	**40.8**
Old age pension, incl. supplements, state social maintenance benefit	54.5	81.9	81.0	68.1	44.2	32.0	82.2	52.9
Pension from other country	29.1	26.3	28.1	23.4	30.8	30.1	28.6	29.1
Compensation at retirement	11.7	7.0	4.9	13.3	13.0	10.6	6.7	11.7
Other type of pension	23.9	54.2	64.6	34.4	31.9	16.5	83.7	23.0
Survivor benefit	15.9	31.5	20.8	14.5	14.4	6.5	30.4	13.4
Sickness benefit	5.4	9.4	8.1	5.4	5.7	4.6	9.0	5.2
State disability pension	21.2	51.0	31.7	21.2	16.6	12.4	48.9	18.0
State social maintenance benefit for disabled	13.2	27.4	16.5	14.1	9.6	4.6	27.5	10.5
Other benefits for disabled & injured people < retirement	15.5	15.5	22.0	13.9	14.2	16.5	18.3	15.3
Maternity + paternity benefits	14.3	17.3	13.8	15.1	12.7	14.7	15.7	14.3
Parental benefit	16.8	26.0	17.1	16.1	14.4	17.3	25.9	16.5
All labor market programs	**9.9**	**15.3**	**10.3**	**12.3**	**9.1**	**7.9**	**14.9**	**9.3**
Unemployment benefit	9.2	15.4	9.8	11.5	9.1	6.5	15.1	8.6
Other related unemployment benefit	5.8	8.2	6.3	6.6	3.7	5.8	7.9	5.6
All social assistance	**5.9**	**24.5**	**7.4**	**5.2**	**4.0**	**2.7**	**22.8**	**4.0**
State family benefit, incl. supplements for disabled	2.5	9.8	3.6	2.7	1.9	1.1	9.3	1.8
Child care benefit, incl. for disabled	3.2	10.5	5.8	3.7	2.3	1.5	10.2	2.3
Child birth benefit, state and municipal	3.4	10.7	5.9	5.0	3.5	2.1	10.0	2.9
Other family related benefits, incl. foster and alimony	11.3	25.7	14.2	5.4	5.4	2.6	25.0	6.2
Municipal GMI benefit	18.5	22.2	8.5	2.6	4.3	n.a.	21.7	5.3
Other municipal benefits, incl. funeral and emergency	5.0	7.1	5.0	6.1	3.1	1.6	6.6	4.4
Other sickness benefit, incl. municipal allowance for medical services	11.9	12.0	3.9	9.1	13.2	15.3	11.4	11.9
Housing allowances	6.1	8.8	5.1	3.1	1.4	2.4	8.3	4.0
Education-related allowances	5.1	10.9	7.8	4.4	3.6	3.5	10.2	4.4

Note: Poor are defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers.

Source: Latvia SILC 2011, World Bank staff calculations.

Table A4.4: Impact of all social protection programs on the at-risk-of-poverty rate

At-risk-of-poverty rate after social transfers	**0.192**
At-risk-of-poverty rate without listed transfer	
All social protection	0.460
All social insurance	0.420
Old age pension, incl. supplements, state social maintenance benefit	0.371
Pension from other country	0.193
Compensation at retirement	0.192
Other type of pension	0.193
Survivor benefit	0.197
Sickness benefit	0.198
State disability pension	0.207
State social maintenance benefit for disabled	0.196
Other benefits for disabled & injured people < retirement	0.194
Maternity + paternity benefits	0.193
Parental benefit	0.196
All labor market programs	0.206
Unemployment benefit	0.205
Other related unemployment benefit	0.192
All social assistance	0.222
State family benefit, incl. supplements for disabled	0.204
Child care benefit, incl. for disabled	0.199
Child birth benefit, state and municipal	0.194
Other family related benefits, incl. foster and alimony	0.196
Municipal GMI benefit	0.196
Other municipal benefits, incl. funeral and emergency	0.193
Other sickness benefit, incl. municipal allowance for medical services	0.193
Housing allowances	0.197
Education-related allowances	0.194

Note: The simulated impact is the change in poverty rate due to each transfer, assuming that household welfare with diminish by the full value of that transfer. At-risk-of-poverty threshold is set at 60 percent of the national median equivalized disposable income after social transfers.

Source: Latvia SILC 2011, World Bank staff calculations.

Annex 5: Using European system of integrated social protection statistics (ESSPROS) data to benchmark social protection expenditure

Description of the data source

To analyze expenditure on social protection the data from the European system of integrated social protection statistics (ESSPROS) was used. ESSPROS is a common framework developed in the late 1970s by Eurostat and the EU Member States providing a coherent comparison between European countries of social benefits to households and their financing.

Social protection benefits are defined as transfers to households, in cash or in kind, intended to relieve them of the financial burden of several risks and needs. These include disability, sickness/healthcare, old age, survivors, family/children, unemployment, housing and social exclusion not covered elsewhere.

ESSPROS is composed of the *core system* and of *modules*[56]. The core system contains annual data:

- Quantitative data: social protection receipts and expenditures by schemes[57]
- Qualitative data: metadata by scheme and benefit description.

ESSPROS classifies expenditure of social protection schemes as follows:

1. Social benefits
2. Administration costs
3. Transfers to other schemes
4. Other expenditure: property income and other

} = Total Social Protection Spending

In this note we only considered Social Benefits which includes transfers to individuals. These consist of the following functions (each including *cash benefits* and *benefits in kind*):

- Sickness/health care
- Disability
- Old age
- Survivors
- Family/children
- Unemployment
- Housing
- Social exclusion not elsewhere classified (n.e.c.)

[56] The modules contain supplementary statistical information on particular aspects of social protection: pensions' beneficiaries and net social benefits.
[57] A scheme is defined as a distinct body of rules, supported by one or more institutional units, governing the provision of social protection benefits and their financing.

Advantages and disadvantages of using ESSPROS data to benchmark social assistance program expenditure

The advantages of using ESSPROS data are manifold. The data is comparable and comprehensive. The expenditures are classified in accordance with the common classification and virtually all types of social protection expenditures are covered. All EU countries are represented and the data goes back to 1990 for core indicators.

Despite its advantages, the data presents some challenges for more detailed analysis of social protection. First of all, the data which is available on the Eurostat website[58] for download is somewhat aggregated (program level data is not available). There is no data on the number of beneficiaries (except for pensions and participants in the labor market programs[59]) and the data is usually released with a significant delay.

Some characteristics of programs are captured well in ESSPROS, such as whether benefits are provided in cash or in-kind, whether they are means-tested or not (as well as frequency of benefit receipt). However, while information is recorded on whether social protection benefits are contributory or not in the qualitative database, this information is not made available in the quantitative database. This significantly limits the extent to which one can make a distinction between social insurance and social assistance programs. If this information was available in the quantitative database, it would allow a much more detailed analysis of non-contributory programs. Moreover, as was demonstrated in this note, program level data is ultimately the best source of information, as it allows studying much more precisely the trends in expenditures and number of beneficiaries if that information is also available.

In order to approximate expenditure on social insurance, labor market and social assistance programs, some adjustments to the data had to be made, which are described in detail below.

[58] http://epp.eurostat.ec.europa.eu/portal/page/portal/social_protection/introduction
[59] This information is captured in a separate the Labor Market Policies database (http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_market_policy)

Adjustments to ESSPROS data to facilitate benchmarking of expenditures

ESSPROS includes some health care spending under social protection spending. We excluded the sickness/health care function from total social benefits, with the exception of paid sick leave (under *cash benefits*).

ESSPROS also includes some labor market programs under the unemployment function. However, for labor market programs, we used the Eurostat's Labor Market Policy database, which captures them more comprehensively.

Finally, resultant social benefit expenditure was classified approximately into contributory (social insurance) and non-contributory (social assistance) programs. Box A5.1 presents an approximate breakdown of social benefits under different ESSPROS functions into these categories.

Box A5.1: Approximate breakdown of social benefits in ESSPROS into social assistance and social insurance

Social Insurance

- ✓ **Old age** - includes only the following *cash benefits*: old-age pension, anticipated old-age pension and partial pension
- ✓ **Disability -** includes only the following *cash benefits*: disability pension and early retirement benefit due to reduced capacity to work
- ✓ **Survivor -** includes all items (*cash benefits* and *benefits in kind*)
- ✓ **Sickness -** includes only paid sick leave
- ✓ **Family/children -** includes income maintenance benefit in the event of childbirth and parental leave benefit which is classified as contributory in the qualitative database

Social Assistance

- ✓ **Old age -** includes all *benefits in kind* and the following *cash benefits: c*are allowance and other cash benefits
- ✓ **Disability -** includes all *benefits in kind* and the following *cash benefits:* care allowance, economic integration of the handicapped and other cash benefits
- ✓ **Family/children -** includes all *benefits in kind* and the following *cash benefits*: birth grant, parental leave benefit (non-contributory), family or child allowance and other cash benefits
- ✓ **Housing -** includes all *cash benefits* and *benefits in kind*
- ✓ **Social Exclusion n.e.c. -** includes all *cash benefits* and *benefits in kind*

Source: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:ESSPROS.

Table A5.1: Spending on Social Protection by social function as a share of GDP (%), select countries, 2008

Social Protection	Social Function	Latvia	European Union (27 countries)	European Union (15 countries)	Estonia	Lithuania	Poland	Slovakia	France	Germany	Denmark
Social Insurance	Old Age	5.28	9.23	9.40	6.06	5.84	8.53	5.15	10.98	9.28	9.27
	Disability	0.58	1.24	1.25	0.87	1.09	1.27	0.86	0.82	0.97	1.81
	Survivors	0.24	1.57	1.60	0.11	0.54	1.98	0.83	1.91	2.04	0.01
	Sickness	0.42	0.87	0.89	0.61	0.73	0.70	0.36	0.69	1.35	1.03
	Family /Children	0.22	0.19	0.20	0.98	0.94	0.04	0.08	0.15	0.05	0.55
Labor Market	Labor market services	0.05	0.19	0.20	0.03	0.08	0.09	0.11	0.21	0.29	0.23
	Active Labor Market Policies	0.08	0.47	0.48	0.04	0.14	0.47	0.15	0.64	0.51	0.98
	Labor Market Supports (Passive)	0.35	0.96	1.02	0.21	0.15	0.35	0.43	1.17	1.10	1.21
Social Assistance	Old age	0.17	0.94	0.98	0.15	0.56	0.35	0.61	0.65	0.03	1.80
	Disability	0.33	0.87	0.91	0.58	0.53	0.33	0.54	0.94	1.30	2.58
	Family/children	1.17	1.87	1.92	0.78	0.93	0.69	1.39	2.33	2.81	3.26
	Housing	0.17	0.52	0.55	0.02	0.00	0.06	0.00	0.80	0.58	0.71
	Social exclusion n.e.c.	0.11	0.35	0.36	0.08	0.20	0.16	0.37	0.44	0.17	0.76

Source: ESSPROS data, World Bank staff calculations.

Table A5.2: Spending on Social Protection as a share of GDP, select countries, 2009

Category	Social Function	Latvia	European Union (27 countries)	European Union (15 countries)	Estonia	Lithuania	Poland	Slovakia	France	Germany	Denmark
Social Insurance	Old Age	7.32	10.05	10.20	7.77	7.58	9.48	6.11	11.71	9.93	10.01
	Disability	0.89	1.30	1.32	1.17	1.45	1.09	1.01	0.85	1.02	2.05
	Survivors	0.31	1.70	1.73	0.12	0.67	2.02	0.96	2.01	2.16	0.01
	Sickness	0.73	0.92	0.95	0.59	0.82	0.80	0.50	0.74	1.49	1.12
	Family /Children	0.28	0.20	0.20	1.41	1.66	0.06	0.11	0.16	0.06	0.60
Labor Market	Labor market services	0.04	0.24	0.25	0.09	0.10	0.10	0.10	0.26	0.37	0.31
	Active Labor Market Policies	0.27	0.54	0.55	0.15	0.20	0.53	0.15	0.72	0.61	1.17
	Labor Market Supports (Passive)	1.03	1.40	1.47	1.38	0.61	0.34	0.67	1.42	1.52	1.73
Social Assistance	Old age	0.20	1.00	1.04	0.18	0.79	0.35	0.62	0.69	0.04	2.07
	Disability	0.40	0.96	1.00	0.71	0.64	0.34	0.71	1.02	1.41	2.87
	Family/Children	1.46	2.07	2.12	0.85	1.16	0.70	1.58	2.48	3.11	3.60
	Housing	0.13	0.57	0.61	0.03	0.00	0.06	0.00	0.85	0.65	0.75
	Social exclusion n.e.c.	0.14	0.41	0.42	0.12	0.38	0.15	0.42	0.56	0.18	0.87

Source: ESSPROS data, World Bank staff calculations.

Table A5.3: Spending on Social Protection in Latvia, indexed real expenditure (2000 prices)

Category	Social Function	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Social Insurance	Old Age	101.7	98.6	101.7	99.3	97.2	100.0	107.6	102.5	112.2	128.0
	Disability	91.3	89.5	90.5	88.9	100.5	100.0	105.1	94.1	109.4	138.0
	Survivors	115.5	104.9	108.4	101.5	101.8	100.0	105.5	97.0	104.4	109.7
	Sickness	41.0	44.1	53.9	62.8	90.6	100.0	124.3	125.7	163.9	233.5
Labor Market	Labor market services	-	-	-	51.0	72.3	100.0	126.2	126.2	103.3	69.1
	Active Labor Market Policies	-	-	-	43.3	44.8	100.0	127.2	81.4	57.0	162.2
	Labor Market Supports (Passive)	-	-	-	98.3	109.0	100.0	102.9	111.5	130.9	316.7
Social Assistance	Old age	71.4	75.2	81.4	82.7	88.2	100.0	108.7	119.6	137.0	130.8
	Disability	84.7	93.8	100.5	99.5	93.9	100.0	116.7	119.0	149.1	146.4
	Family/children	83.0	85.0	85.4	92.4	89.2	100.0	100.5	105.5	119.9	122.7
	Housing	97.8	94.7	100.5	92.2	95.4	100.0	152.4	214.6	284.3	173.4
	Social exclusion n.e.c.	47.2	47.6	53.7	69.7	109.3	100.0	94.7	94.2	91.3	94.0

Source: ESSPROS data, World Bank staff calculations.

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Scientific research: Latvia: "Who is Unemployed, Inactive or Needy? Assessing Post-Crisis Policy Options"

ANALYSIS OF THE INCENTIVE STRUCTURE CREATED BY THE TAX AND BENEFIT SYSTEM

Victoria Strokova and Tomas Damerau

June 2013

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European Social Fund Activity

„ Complex support measures" No. 1DP//1.4.1.1.1./09/IPIA/NVA/001

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FINANCIAL INCENTIVES OF THE TAX AND BENEFIT SYSTEM IN LATVIA

Victoria Strokova and Tomas Damerau

1 Introduction

Latvia is recovering from a very deep recession that is continuing to cause severe hardship for families and significant policy challenges for the government. Between early 2008 and late 2009, unemployment rates soared by 15 percentage points to reach more than 20 percent. It has since fallen, but continues to be more than twice as high as before the crisis with a growing share of the long-term unemployed (Figures 1a and 1b). Households have seen real incomes fall by almost 20 percent (Figure 1c). At 9.7 percent of GDP in 2009, the government's budget deficit peaked well above the EU average but has been brought down much more quickly than in other EU countries. Nevertheless, significant fiscal pressures remain, particularly on the revenue side (Figure 1d). In the post-recession period, carefully balanced tax and transfer provisions are crucial as the budgetary and welfare costs of ineffective policy design are very large during and after a severe downturn.

In addition to the downturn-related urgency of well-designed and cost-effective tax/benefit measures, policy debates in Latvia have centered on a number of structural policy issues, even prior to the recession (World Bank 2007). Comparatively low levels of social spending, high poverty rates, and a concern over work disincentives will continue to present challenges in Latvia as a recovery takes hold. How these challenges are addressed can shape both the pace of the recovery, and families' resilience to future economic shocks.

This policy note considers two crucial outcomes of tax and transfer policies in Latvia; *(i)* their capacity to alleviate poverty, reduce inequality and cushion income losses, and *(ii)* their implications for work incentives and their effectiveness at "making work pay". For the most part, the analysis adopts a "family perspective" by evaluating the effects of benefit entitlements and tax burdens on the income situation of specific households.

The rest of this note is structured as follows. Section 2 examines income levels of benefit recipients and shows how they compare across countries and over time. The comparisons employ simple model calculations that illustrate benefit entitlements and tax burdens for families in a range of different circumstances. In particular, they show which types of families are likely to have been among the "gainers" or "losers" of policy changes enacted before and after the onset of the economic crisis.

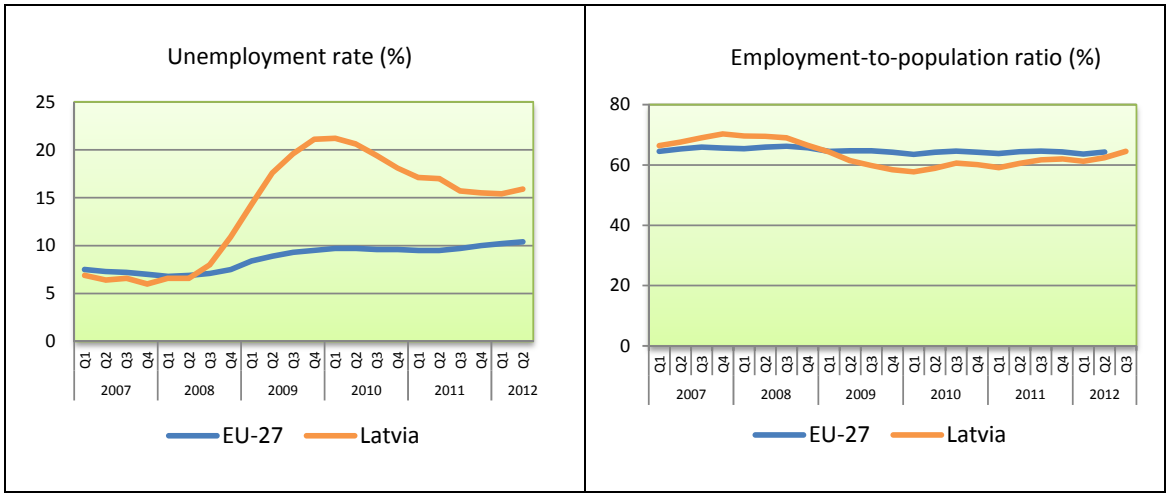
Section 3 discusses the importance of tax and benefit policies for shaping work incentives and employment outcomes. It reviews evidence on the economic relevance of work incentives and discusses how their significance varies with macroeconomic conditions and, specifically, with levels of unemployment. The section then presents and discusses a range of work incentive indicators for Latvia. In addition to standard indicators, such as replacement rates and marginal effective tax rates, we also illustrate the possible impact on work incentives of unreported incomes (informal work and underreporting).

Section 4 discusses "make work pay" policies in advanced EU and OECD countries which aim to increase incentives to work for low-skilled low-wage workers. It also discusses implications of informality and under-reporting for design of these policies.

Section 5 summarizes announced policy changes. It then illustrates which types of families would "gain" or "lose" under the proposed or announced policy scenarios. It discusses a reform proposed to increase incentives to work for low-wage workers and assesses its potential impact compared to other countries' policies. The section ends by proposing a set of priorities to strengthen both the "protection" and the "promotion" functions of tax and benefit policies. The final section concludes.

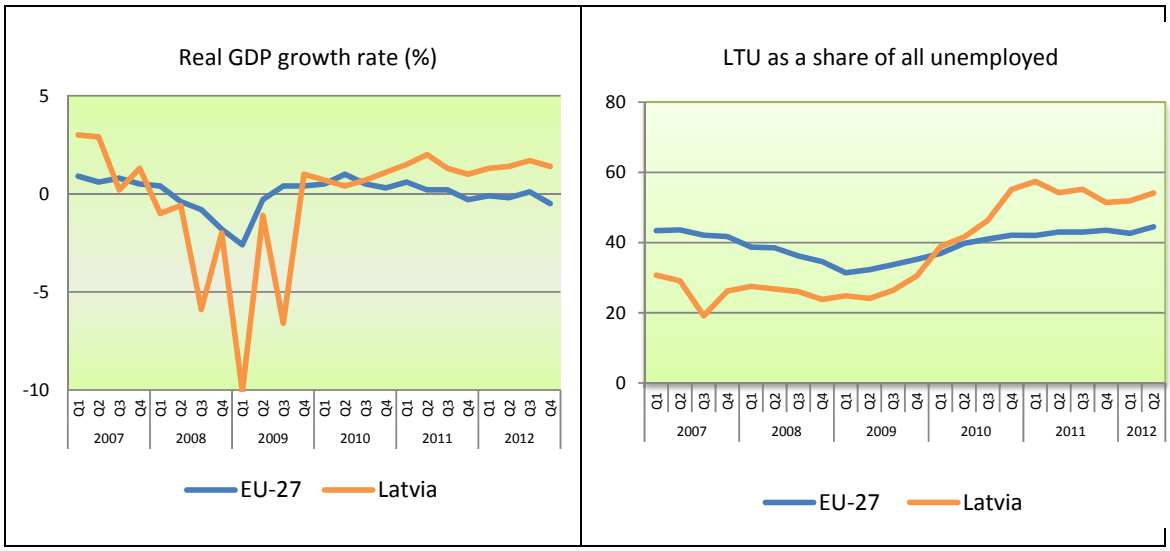
Figure 1: The recession brought severe challenges for households - and the government

a. Unemployment rate and employment-to-population ratio



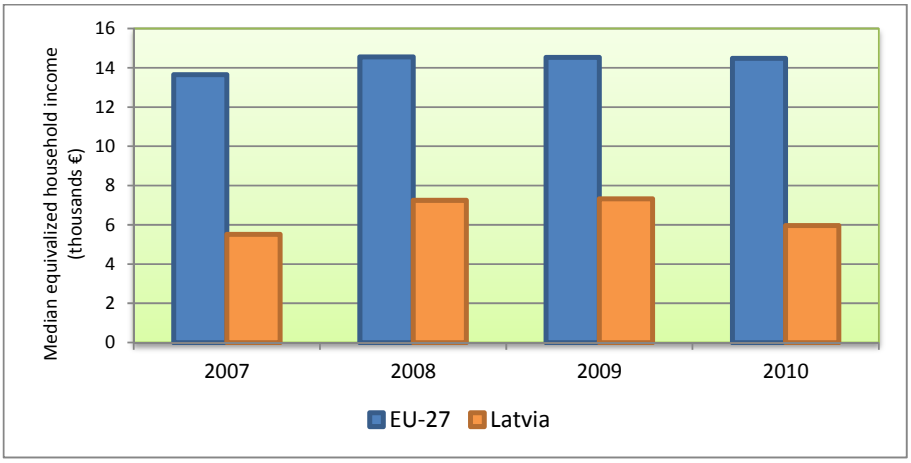
Source: Eurostat .

b. Real GDP growth rate and long-term unemployment, as a share of all unemployed



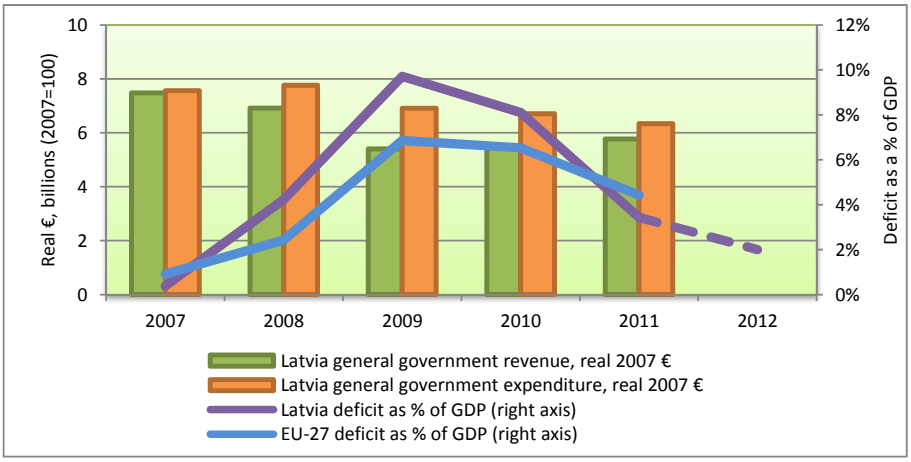
Source: Eurostat.

c. Median equivalized household incomes in real terms



Source: Eurostat.

d. Fiscal balance:



Source: Eurostat.

2 Benefit provisions and income adequacy

Income data from this and earlier downturns show that recessions tend to trigger large losses for certain of the poorest income groups in OECD countries. And, compared to higher-income groups, those at the bottom of the income ladder also see a much slower recovery once economic conditions start to improve.[1] In Latvia, the recession has also had a disproportionate impact on low-income groups. Figure 2 shows that losses in earnings and other market incomes affected the poorest households in particular. These distributional patterns are of particular concern as the recent recession follows a period when income inequality has been rising in many countries, and at the same time for many countries including Latvia, income poverty rates are high. One of the consequences of these trends is an increased demand for well-designed government support and redistribution policies.

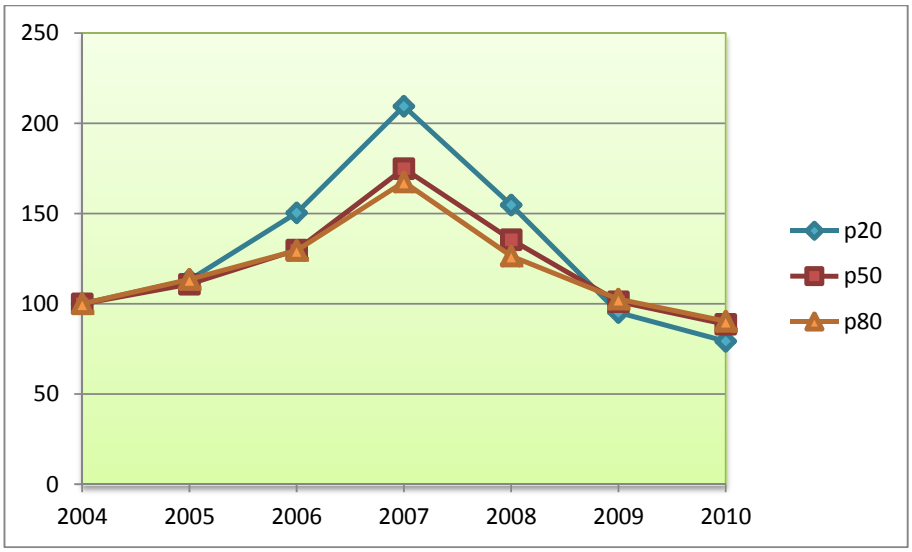
For families experiencing earnings losses, unemployment benefits and related out-of-work benefits are the primary support measures. They help to share the income risks associated with unemployment between different groups of workers, and they maintain acceptable living standards

[1] Immervoll and Richardson (2011).

during times of joblessness ("consumption smoothing"). Importantly, they are also intended to facilitate efficient job reallocation from declining to expanding sectors by promoting a good match between jobseekers and vacancies. From a macro-economic perspective, income support measures also have a central role as an automatic stabilizer.

Figure 2: Low-income groups have experienced larger losses

Household market incomes, constant prices, 2004-2010



Notes: Households headed by working-age individuals. P20 and P80 refer to the 20th and 80th percentiles of the distribution of household market incomes. P50 refers to the median. "Market" income includes all private incomes and, hence, also private transfers between households such as remittances. Incomes are equivalized using OECD modified scale.

Source: Authors' calculations using EU-SILC.

2.1 Unemployment benefit provisions: Latvia in comparative perspective

Annex 1 Tables A1 and A2 provide a comparative overview of the main institutional features of the primary unemployment compensation programs in Latvia and selected OECD and EU comparators. **Unemployment insurance** programs exist in most EU and OECD countries and offer compensation for lost earnings subject to work-related conditions (Table A1). Reflecting insurance principles, claimants must have contributed to the insurance fund or have been employed over certain periods in order to be eligible. Claimants must also be actively looking for work and, in many cases, unemployment has to be involuntary. Benefit durations are limited in most, but not all, countries. Insurance is mandatory for most employees, but voluntary in some Nordic countries.

In several countries (e.g., in Estonia and Finland), jobseekers whose entitlement to unemployment insurance benefits has expired—or who are ineligible in the first place—may be entitled to **unemployment assistance** (Table A2).[2] Eligibility is often, but not always, conditional on previous employment. As unemployment benefits, unemployment assistance is accessible only to those who are available and actively looking for work. Benefit durations may or may not be limited. Although both insurance and assistance benefit schemes are typically (but, again, not universally) financed by contributions to unemployment insurance funds, the main purpose of assistance benefits is the provision of a minimum level of resources during unemployment rather than insurance against lost earnings. As a result, benefit levels tend to be lower and links to previous earnings tend to be weaker. They are reduced if other incomes are available, but means-testing tends to be less comprehensive than for minimum-income social assistance benefits.

[2] In a few non-European OECD countries (Australia, New Zealand), unemployment assistance is in fact the main unemployment benefit.

Compared with other countries, contribution requirements for entitlement to unemployment insurance are relatively light in Latvia (nine months in the past year, column 1 in Table A1). Regulations regarding benefit generosity are, however, very strict, especially for low-income workers. This is not a result of a low replacement rate; at 65 percent of gross earnings, this is approximately in line with other countries (column 5). However, among countries with a purely earnings-related unemployment benefit, Latvia is the only country which has neither a benefit floor, nor a ceiling (columns 7 to 10). As a result, benefit entitlements for workers on very low earnings are lower than in other countries. At the same time, the lack of a strict benefit ceiling means that benefits are unusually generous for high-income earners.

Across countries, the most notable driver of differences in benefit generosity is the maximum benefit duration, especially after a deep recession when unemployment spells are much longer than at other points during the economic cycle (see long-term unemployment trends in Figure 1). In Latvia, maximum benefit duration (column 4 in Table A1) was extended to nine months for all recipients in 2009, but is still shorter than in the majority of EU and OECD countries.[3] Unlike Latvia, several of the countries with similar or shorter maximum durations provide follow-up unemployment assistance benefits for low-income families whose insurance benefits have expired.

For those entitled to unemployment benefits, a simple way of summarizing many of the relevant policy parameters is by means of benefit replacement rates, which express net income of a beneficiary as percentages of net income in a previous job. Table 1 shows benefits replacement rates at different stages of the unemployment spell (from the first to the fifth year of unemployment) for prime-age individuals. Results are averages over different earnings levels and family situations and account for taxes and for family-related benefits that are typically available (see table notes for calculation details).

During the first year of unemployment, prime-age workers entitled to unemployment benefits in 2010 had net incomes above 60 percent in just under half of the countries. Income losses during the first year were smallest in Nordic countries and in continental Europe. On the other end of the spectrum, unemployed entitled to benefits but with no other support in Czech Republic, Korea, Slovak Republic faced income losses of more than 60 percent during the first year of unemployment. Because benefits in Latvia are available for less than a year, the average net replacement rate over a 12-month unemployment spell is also low, at 46 percent.

In countries operating insurance benefits, net replacement rates typically decline during the unemployment spell. Prime-age long-term unemployed in Latvia and a few other countries lose their entire unemployment benefit after 12 months or less (the very low, but non-zero, net replacement rates in later years are due to family support payments, which maintain a very small amount of income after unemployment benefits expire).[4] In a number of countries, means-tested unemployment assistance provides continued (usually lower) benefit entitlements once insurance benefits expire (Austria, Finland, France, Germany, Greece, Portugal, Spain), while four English-speaking countries operate unlimited means-tested unemployment assistance benefits (Australia, Ireland, New Zealand, the United Kingdom), resulting in a flat replacement-rate profile.

[3] Prior to 2009, maximum durations depended on contribution histories.

[4] Prior to recent crisis-related extensions of benefit duration, unemployment insurance benefits in the United States also expired after 26 weeks in most states.

Table 1. Generosity of unemployment benefits at different points during an unemployment spell

Net replacement rates in %, 2010 policy parameters [a]

	Year 1	Year 2	Year 3	Year 4	Year 5	Five-year average
Belgium	71.4	64.5	64.5	64.5	64.5	65.8
Ireland	63.8	63.9	63.9	63.9	63.9	63.9
Austria	62.1	58.9	58.9	58.9	58.9	59.6
Malta	51.4	51.5	51.5	51.5	51.5	51.5
New Zealand	49.5	49.5	49.5	49.5	49.5	49.5
Australia	47.4	47.4	47.4	47.4	47.4	47.4
Portugal	76.1	76.1	54.4	24.1	4.6	47.1
Germany	64.4	47.5	41.3	35.0	35.0	44.7
France	66.9	66.9	28.8	28.8	28.8	44.0
Finland	61.7	58.5	31.8	31.8	31.8	43.1
Sweden	60.2	58.7	55.6	19.2	7.7	40.3
Norway	73.2	73.5	18.0	17.5	17.5	39.9
Spain	68.4	64.7	23.5	23.5	12.5	38.5
Iceland (b)	59.3	54.6	54.6	7.7	7.7	36.8
Denmark	74.1	74.1	9.6	9.6	9.6	35.4
Netherlands	73.0	61.2	5.3	5.3	5.3	30.0
United Kingdom	31.2	29.5	29.5	29.5	29.5	29.8
Canada	62.4	17.1	17.1	17.1	17.1	26.2
Switzerland	83.0	41.5	0.0	0.0	0.0	24.9
Luxembourg	85.5	9.1	9.1	9.1	9.1	24.4
Slovenia	56.8	11.8	11.8	11.8	11.8	20.8
Bulgaria	71.7	7.1	7.1	7.1	7.1	20.0
United States	51.0	46.1	0.0	0.0	0.0	19.4
Hungary	44.4	10.1	10.1	10.1	10.1	17.0
Poland	46.9	8.6	8.6	8.6	8.6	16.2
Slovak Republic	37.6	10.5	10.5	10.5	10.5	15.9
Romania	54.5	6.0	6.0	6.0	6.0	15.7
Japan	48.1	5.5	5.5	5.5	5.5	14.0
Estonia	50.1	4.6	4.6	4.6	4.6	13.7
Lithuania	32.2	9.0	9.0	9.0	9.0	13.6
Greece	46.8	8.9	4.0	4.0	4.0	13.6
Czech Republic	30.0	8.5	8.5	8.5	8.5	12.8
Latvia	46.0	2.4	2.4	2.4	2.4	11.1
Israel	44.3	2.6	2.6	2.6	2.6	11.0
Italy	45.1	0.0	0.0	0.0	0.0	9.0
Turkey	40.6	0.0	0.0	0.0	0.0	8.1
Korea	29.3	0.6	0.6	0.6	0.6	6.3
EU (average)	**56.6**	**33.6**	**23.5**	**20.7**	**19.1**	**30.7**
OECD (average)	**56.4**	**35.5**	**22.8**	**19.0**	**17.7**	**30.3**

a. Relevant policy rules are summarized in Annex 1 Tables A1 and A2. Countries shown in descending order of the five-year average. Calculations consider cash incomes (in-work earnings, unemployment benefits as well as any family and in-work benefits), income taxes and mandatory social security contributions payable by workers. To focus on the role of unemployment benefits, no social assistance or housing-related benefits are considered and any entitlements to severance payments are also excluded. Net replacement rates are for a prime-age worker (aged 40) with a "long" and uninterrupted employment record and are averages over 12 months, four different stylized family types (single and one-earner couples, with and without children) and two earnings levels (67 percent and 100 percent of average full-time wage).

b. Excluding the retroactive extension in unemployment benefits from three to four years, passed in December 2010.

Source: OECD tax-benefit models (*www.oecd.org/els/social/workincentives*).

2.1.1 Benefit coverage: How many unemployed receive unemployment compensation?

Simple "textbook" economic models of labor-supply decisions and job-search consider out-of-work benefit levels as a *de-facto* wage floor. In these models, benefit replacement rates assume a central role since wage floors are the main factor determining people's decision to work and exert job-search efforts. In reality, benefit receipt is not simply a choice but is associated with more or less well defined—and more or less demanding—eligibility conditions. Some of these conditions exclude certain individuals from the group of potential benefit recipients altogether. These provisions, which are sometimes referred to as *entitlement* conditions, serve as an initial "filter" that target support measures to certain groups. For instance, in just under one third of EU countries, those resigning from their jobs (rather than being laid off) are not eligible for unemployment benefits (see Venn, 2012), individuals with short or interrupted employment records may not be eligible for unemployment insurance benefits (see column 1 in Table A1), and those with assets may not qualify for means-tested benefits.

In addition, those entitled to receive a benefit in principle may have to comply with specific behavioral requirements which are an integral part of activation strategies, namely, job-search activities, participating in interviews and active labor market programs (ALMPs), and accepting suitable job offers. These requirements tend to make continued benefit receipt costly for those who are not genuinely seeking to overcome benefit dependency. Because of these costs of claiming benefits, the provision or strengthening of out-of-work support does not necessarily have to translate into reduced job-search efforts.[5] Well-defined eligibility conditions can therefore help to ease any trade-offs between adequate out-of-work benefits and maintaining strong labor-market performance.

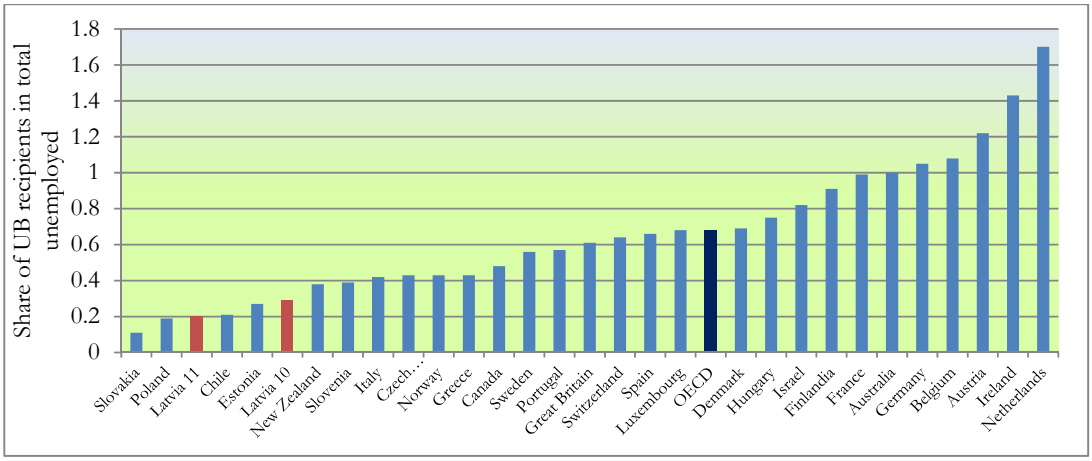
The importance of entitlement conditions such as contribution requirements, and the costs associated with benefit receipt, becomes clearer when considering the share of jobseekers who actually receive benefits. Figure 3 shows that in OECD countries on average about 70 percent of unemployed received unemployment benefits in 2010. But in most countries, coverage rates were much lower. In Slovakia and Poland, less than one in five job-seekers (those reporting to be available for work and actively looking for a job) received unemployment benefits. In Latvia, only about 30 percent of the unemployed received unemployment benefits in 2010. This is despite the fact that benefit duration was extended for all qualifying jobseekers in the mists of the crisis.[6] As the share of long-term unemployed increases (see Figure 1b), coverage fell down further, as the unemployed ran out of unemployment benefits. For these unemployed, availability and adequacy of minimum-income benefits is an important factor, as some of them would come to rely on these benefits while they continue searching for jobs.

[5] Frederiksson and Holmlund (2006) provide a survey of theoretical models of job search.

[6] From July 1, 2009 duration of unemployment benefit has been increased on a temporary basis (until December 31, 2011) to 9 months, regardless of the length of contribution history. However, since January 1, 2013 this change was made permanent.

Figure 3: Unemployment benefit coverage

% of ILO unemployed receiving benefits, selected countries



Notes: Recipients of programs classified as unemployment insurance or unemployment assistance divided by Labour Force Survey unemployment. Due to institutional specificities, the program classification cannot ensure perfect cross-country comparability. Data for 2012, except Norway (2008)

Sources: OECD (2012).

2.2 Minimum-income benefits: Latvia in comparative perspective

Those who do not qualify for any unemployment benefit, or who run out of their benefits before they find new jobs, may receive **minimum-income benefits**, with central or sub-central governments acting as providers of last resort (see Table A3 for a summary of policy parameters). The main eligibility criteria relating available incomes and assets to entitlements do not depend specifically on claimants' work history. Income and asset tests can be very restrictive and always take account of the resources of other persons living with the benefit claimant. Eligibility may be conditional on the claimant's effort to regain self-sufficiency. But whereas rules and practices vary substantially across countries, job-search and other activity requirements can be much less demanding than in the case of unemployment benefits.[7] Unlike most unemployment benefits, minimum-income benefits are typically not subject to explicit time limits but are paid for as long as relevant conditions are met. Benefits often "top-up" income from other sources (including other benefits). Because larger families require more resources to secure a given living standard, top-ups are more likely for benefit claimants with dependent family members.

Table A3 (columns 6 and 7) shows that benefit amounts provided by **Guaranteed Minimum Income (GMI) program** are comparatively low in Latvia. For instance, benefits for a single individual with no other income amount to at least 15 percent of the average wage in half of the 32 EU and OECD countries listed in the Table. Latvia is one of only six countries where single individuals receive under 10 percent of the average wage at most (i.e., before any benefit reductions due to the means test). However, as with unemployment benefits, minimum-income support is provided under a range of different policy headings. When comparing across countries, it is therefore useful to consider the generosity of the overall benefit package. Minimum income benefits, means-tested housing benefits (see Box 1), and other benefits such as means-tested family or lone-parent benefits in some

[7] For instance, unlike unemployment benefit recipients in most countries, minimum-income benefit recipients often do not enjoy any legal job or status protection in the form of "suitable-job" criteria. Formally, they would therefore have to accept any available job although the extent to which this is enforced in practice is difficult to establish. Reasons for deviating from strict formal availability criteria may be related to employers' concerns that pushing referrals of overqualified benefit claimants could result in unmotivated candidates who feel "too qualified" for the job (see, e.g., Box 3 in Tergeist and Grubb, 2006).

countries) are important additional components of the overall support package, especially for those running out of unemployment benefit entitlements.

What is common to these different benefits is an objective of **poverty alleviation** and ensuring a **socially acceptable living standard** for families without any other income sources, or with very low incomes. It is therefore useful to relate the value of overall minimum-income "packages" (including GMI, cash housing benefits and any family-related benefits) to commonly used income-poverty thresholds.

The values of these benefit packages are shown in Figure 4 for two different family types in different countries. The most important observation is that minimum-income benefits typically fall significantly short of lifting people out of poverty, as defined by Eurostat's at-risk-of-poverty rate. On the one hand, this underlines the importance of encouraging and supporting additional income-earning activities for those receiving these benefits. On the other hand, the often significant poverty gaps highlight the need for mechanisms that provide adequate support for those unable to earn independent income. Benefit generosity does indeed vary significantly across countries. In addition, there are large income differences between family types even within countries. For instance, compared to the at-risk-of-poverty line, the Latvian GMI benefit for single individuals is the fourth lowest in the EU (top panel of Figure 4). Benefits for a family with children are significantly more generous, but still only just over one half of the at-risk-of-poverty cutoff.

It is important to keep in mind that, for both family types, these benefit levels are the *maximum* amounts that can be received by families with no other incomes:

- Since GMI and housing benefits are means tested, amounts will be significantly lower for families with other declared incomes. This is also the case in Latvia, where preliminary analysis of administrative social assistance data for the city of Riga indicates that the GMI benefit payouts are often significantly lower than the maximum amount; before the economic crisis, average benefit payouts were just over 50 percent of the maximum amount.

- Housing benefits are generally shown for the capital city (or another big city in some countries) and can be expected to be significantly lower in other municipalities.

- Families can experience interruptions to their benefit support as a result of either benefit time limits or administrative procedures. In Latvia, eligibility to the GMI program is recertified every three months and, before the economic crisis, benefits could be paid for a maximum of nine consecutive months. As a result recipients can be pushed off benefits relatively quickly so that benefit spells have typically been short or interrupted. Indeed, administrative data for Riga shows that a majority of claimants have receive benefits for less than 12 months, and many of them may experience spells of very low incomes as a result of payment interruptions (World Bank 2013).

More generally, while Figure 4 shows income levels for families actually receiving these safety-net benefits, social safety nets do in fact reach only a small proportion of the low-income population. For instance, household budget surveys indicate that 12.5 percent of the poorest quintile in Latvia (the bottom fifth of the population in terms of consumption expenditure) receive the GMI or cash housing benefits[8]. This is substantially lower than pre-crisis coverage rates in many countries in the Europe and Central Asia region (Figure 5). Studies on benefit take-up regularly find very high non-take-up rates for means-tested benefits in the order of 40 percent or more, meaning that almost half of those entitled to these benefits actually receive them (Bargain *et al.*, 2011; Hernanz *et al.*, 2004).

[8] Staff calculations based on Latvia 2010 HBS. Households are ranked on the basis of per capita consumption pre all social assistance transfers.

Box 1: Housing benefits in Latvia

Housing benefits for rented accommodation are provided by local governments and can be received in cash or in kind. Since both housing costs and eligibility rules vary geographically, benefit coverage and benefit amounts vary substantially across municipalities (as an illustration, see below the rules for Riga). Administrative data show that, in some municipalities very few families receive housing benefits while, in others, the number of families receiving housing benefits is higher than the number claiming the GMI. For the country as a whole, estimates based on household budget survey data for 2010 indicate that almost 50 percent of those who receive the GMI also receive in-kind housing support (while as few as 6.5 percent of GMI beneficiaries also receive the cash housing benefit). Clearly housing benefits are therefore an important income source for a large number of low-income families.

Housing benefit rules in Riga
Housing benefits are granted and paid by social services of Riga for the place of residence declared by the claimant, where claimant is actually living. There are different kinds of payment (payments to public utility services, fire wood charges etc.) covered by housing benefit. The municipality has the right to grant an increased amount of housing benefit to state pension receivers, recipients of state social security benefit and families with minors. Housing benefit is estimated as a difference between the GMI level set by Riga municipality (GMI*) for assistance claimant and the amount of consumption standards of living space and public utility service and total income of the assistance claimant:

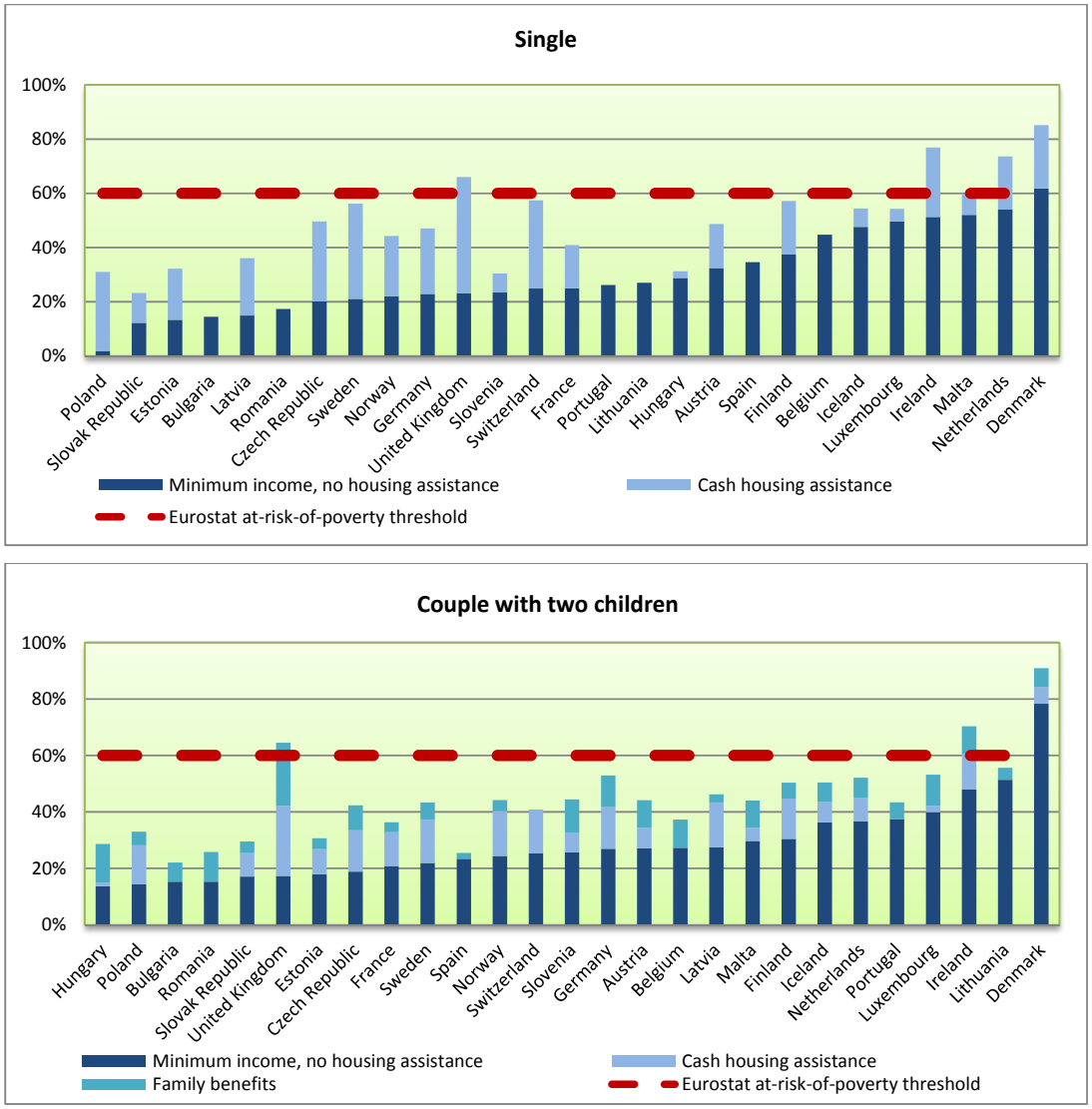
$$P = GMI^* + K - I$$

where P equals the amount of housing benefit; GMI* equals the level of guaranteed minimum income set by Riga municipality for the assistance claimant; K equals the consumption cost of living space and public utility service (limit for actual costs); I equals the income of assistance claimants (including the benefit received in the respective month to ensure the GMI level). The average income of the claimant in the last three months must not exceed LVL 250 per month for a separately living person and 200 LVL per month per person per household. Housing benefit is calculated and paid each month.

Source: OECD Benefits and Wages.

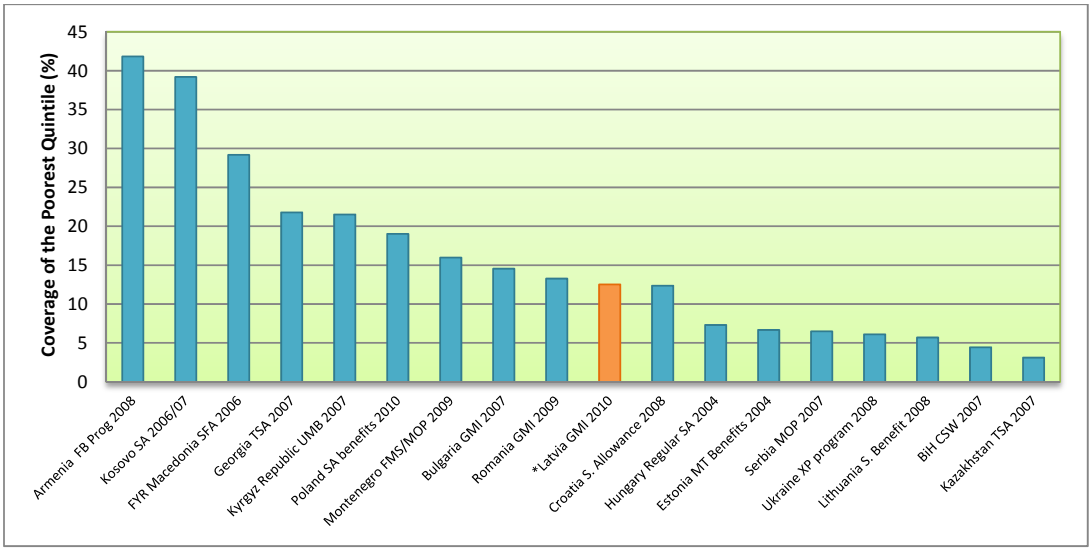
Figure 4: GMI recipients with no other incomes are at high risk of poverty

Benefit levels, % of median equivalized household disposable income in 2010



Notes: At-risk-of-poverty thresholds are those used by Eurostat (60 percent of median equivalized household income).
Sources: OECD/EU Tax and benefits indicators database.

Figure 5: Coverage of the poor by main poverty targeted social assistance programs in ECA, various years



Note: For Latvia, national consumption aggregate is used while for the rest of countries a standardized welfare aggregate developed by World Bank's ECAPOV team is used. Estimates for the GMI program include housing benefit in cash due to small sample size.
Source: Europe and Central Asia Social Protection database. Staff calculations based on national household survey data.

2.3 A detailed look at the situation of different types of benefit recipient

This section takes a closer look at the benefit provisions for different family situations in Latvia (see Figure 6). Clearly, different low-income households fare quite differently under the current benefit system in Latvia. In 2010, a Latvian family with two children and no other income sources received GMI benefits at a level that put it less than 30 percent of median household income, or just under half of Eurostat's "at-risk-of-poverty" line. Family benefits contribute only a small additional income supplement. For families entitled to housing benefits, total income was higher at just under 50 percent of median household incomes – but still well below the Eurostat poverty threshold.

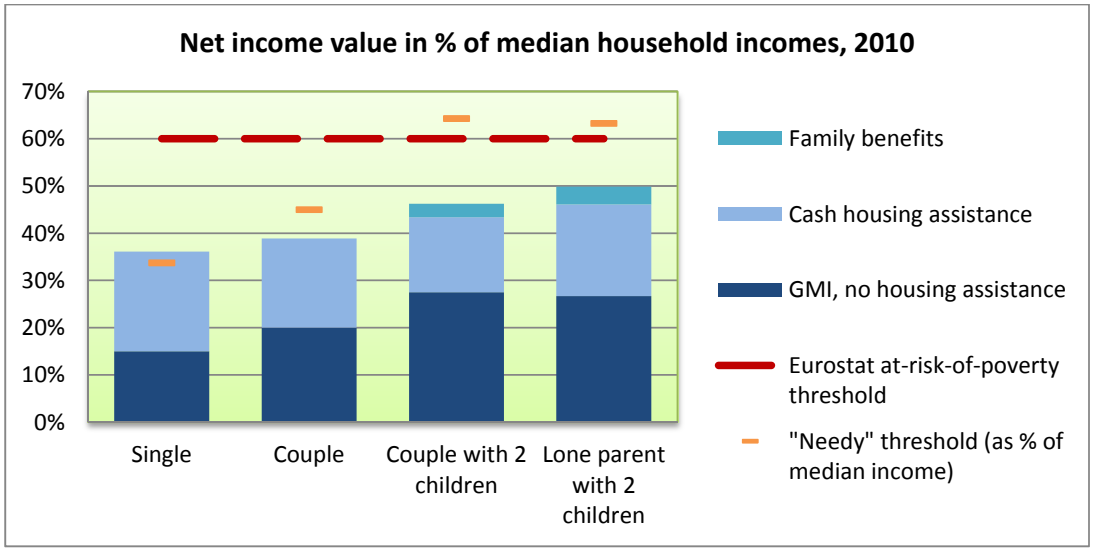
Benefits are much less generous for single individuals, both in absolute terms and in international comparison. Relative to the at-risk-of-poverty threshold, the Latvian GMI benefit for single-person households is the fourth-lowest in the EU. The amount of GMI alone reaches less than one fourth of the poverty threshold, which would be likely to leave recipients in deep poverty by most standards. Single individuals entitled to both housing benefits and GMI and no other income sources have incomes just over one half of the Eurostat poverty threshold.

Interestingly, while single-person households show the least generous benefit amounts relative to the Eurostat poverty threshold, benefits for singles are approximately in line with the Latvia's "needy" line. This national threshold is not an official poverty line, but is instead used for determining eligibility for certain services and benefits targeted to the poor.[9] The very significant divergence between the "needy" line and the commonly used poverty threshold suggests a need for a broad debate about the adequacy of minimum-income support, and the mechanisms used to determine both eligibility and benefit amounts.

[9] In 2010, the "needy" threshold corresponds to a per capita income of 90 LVL per month.

Figure 6: Minimum-income benefits: Maximum entitlements for different family types

Benefit levels, % of median equivalized household disposable income in 2010



Sources: Authors' calculations using OECD tax-benefit models. Poverty thresholds are those used by Eurostat (60 percent of median equivalized household income), There is no official poverty line in Latvia, but the "needy" threshold corresponds to a per capita income of 90 LVL per month.

2.4 Who are the "gainers" and "losers" of recent tax-benefit reforms?

Recent international studies have shown that tax and benefit policies have played a major role in either slowing or accelerating the well documented trend towards widening income inequalities (OECD, 2011a). In most countries, changes in the effectiveness of government redistribution were driven mainly by the benefit system.

To examine the impact of policy changes on family incomes and inequality in Latvia, we follow Immervoll and Richardson (2011) who use model calculations similar to those used in Sections 2.2 and 2.3 above in order to evaluate how recent reforms have affected the incomes of different model families at various earnings levels. The advantage of this simulation approach is that it can hold "everything else" constant (unemployment levels, market-income inequality, household composition, etc.), and hence focus on the role of policy changes alone. For instance, it can show whether families at the bottom, middle and top of the income distribution are now better or worse off than they would have been with *unchanged* policies. This way of comparing the net effect of redistribution systems between different periods permits pin-pointing "gainers" and "losers" of policy reforms.

Importantly, changes in tax burdens and benefit entitlements do not only result from policy action; they can also occur if policies are *not* adjusted. For instance, since income taxes increase at higher income levels, increasing earnings will result in higher tax revenues (this effect is often referred to as "fiscal drag") and will change the extent of redistribution that income taxes achieve. An analogous effect in reverse direction exists for income-tested or earnings-related benefits. In a typical progressive tax-benefit system, rising nominal earnings levels will therefore result in lower net benefits (lower benefits and higher taxes) unless all relevant policy parameters (such as tax-band limits, benefit amounts, income limits) are regularly adjusted in line with earnings growth. In other words, rising average earnings levels lead to "automatic" changes in redistribution mechanisms, if no compensating policy action is taken (OECD, 2008).

When quantifying the effects of policy action (or inaction) on family incomes, we therefore compare the amount of net benefits that a family receives with the net benefits they would have received had previous policies remained in place and been simply adjusted for earnings growth. Put differently, we classify "gainers" and "losers" using an earnings-indexed tax-benefit system as our baseline or

comparisons. For instance, if the income tax paid by an average earner increased by 10 LVL between year X and year Y, while it would have increased by 15 LVL in an earnings-indexed tax system, then the gain of this individual resulting from income tax changes between the two years would be 5 LVL. Similarly, if a family received benefits of 100 in both year X and year Y, and average earnings had increased by 10 percent over the period, then the loss of this individual resulting from the failure to index benefits to earnings would be 10 LVL.

The analysis that follows presents changes in net benefits since 2005. We use a graphical format to summarize the resulting income changes and express them as a percentage of families' net (or disposable) income. Figure 7 below shows these gains and losses for a broad earnings range (zero to 200 percent of the average full-time wage). Figure 7 below shows these **gains or losses during three recent periods**:

- pre-crisis (2005 to 2008),
- crisis (2008 to 2010), and
- Post-crisis (2010 to 2012).

The sum of the three is the overall effect on family income of all relevant tax-benefit policy changes between 2005 and 2010 combined, and is shown as a solid blue line.

For example, if policy changes between 2005 and 2010 had either boosted or reduced everyone's disposable income in a given earnings range by the same proportion, this would show up as a horizontal line and would indicate that these changes had no impact on inequality in this earnings range. Downwards sloping lines are indicative of progressive changes that would redistribute from higher to lower incomes. This would narrow income differences and result in reduced inequality. Conversely, upwards sloping lines indicate regressive policy changes that have reduced income redistribution and would therefore widen income inequalities.

There have been a number of significant policy changes over the period (see Box 2). As explained above, in addition to discrete legislative policy changes, the extent or lack of regular adjustments will also affect the assessment of "gainers" and "losers". Over the period 2005 to 2008, average full-time wages in Latvia have grown by 93 percent. To keep relative incomes unchanged over this period, without either gainers or losers, benefit amounts and tax parameters (such as tax brackets, allowances and credits) would have had to go up by the same proportion. In fact, a number of policy parameters were adjusted only infrequently, or at rates considerably below wage growth.

As a result low-income households have seen income gaps grow relative to average earners. In other words, their benefit entitlements did not keep up with earnings growth and, hence, their incomes fell further behind relative to an average earner (Figure 7). These losses can be observed for all four family types shown (single person, single parent with 2 children, one-earner couple and one-earner couple with 2 children). Families which children – single parents and one earner couples - have suffered the largest relative losses, with their net incomes falling by as much as a quarter. Those who are not dependent on benefits have seen income gains as a result of tax reductions.[10] For instance, in 2005, net incomes of low-income single parent households with 2 children were equivalent to almost 60 percent of the average wage in that year. In 2008, however, net incomes of such households were just slightly higher than 45 percent of the average wage.

During the crisis (2008-2010), some of these losses were reversed as certain benefit provisions were made more generous, while earnings growth slowed or reversed. However, while the government introduced several measures to counteract the impact of the crisis (see Box 2), families with children did not benefit to the same extent as childless singles and couples. Lone parent households saw their benefit levels fall further as a result of elimination of special benefit levels which existed prior to the

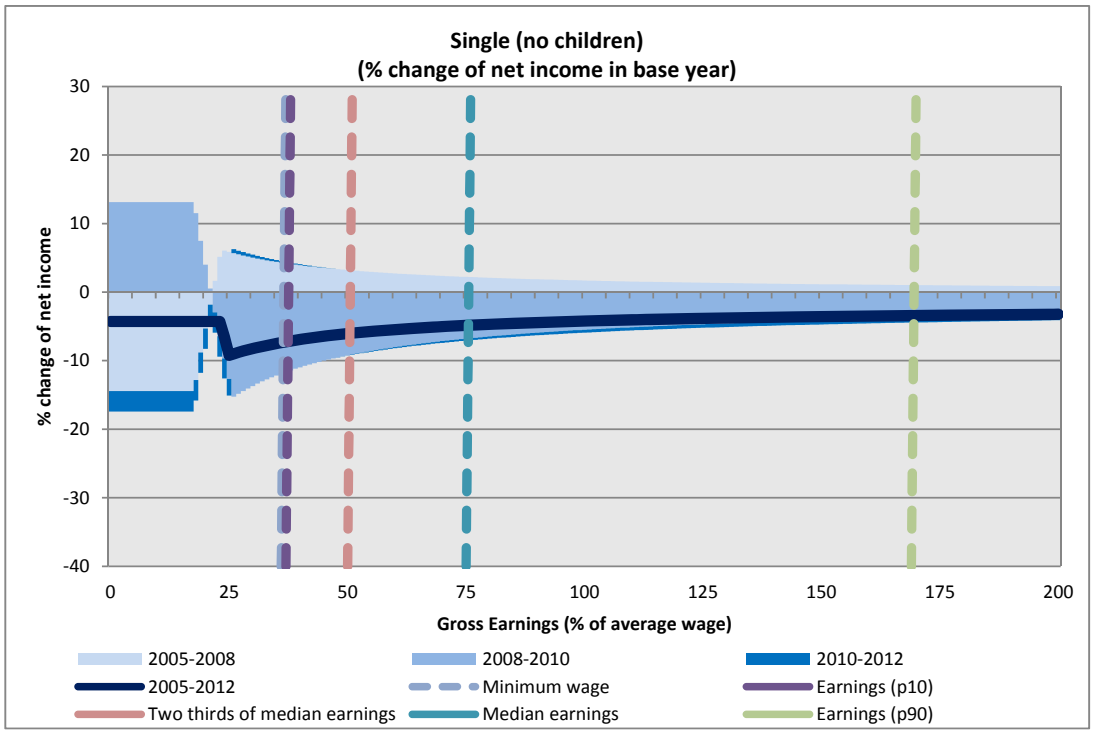
[10] Even though personal income tax remained the same between 2005 and 2008, the amounts of tax-free allowances increased by 150 percent during this period.

crisis in the City of Riga[11] (see Table A4). For single parents the GMI rates went down from 48 LVL per month to 40, and for children in such families the rate went down from 48 LVL to 45. Higher taxes led to losses for families whose earnings make them ineligible for GMI and housing benefits (e.g., childless couples with total earnings above the minimum wage, and childless singles with earnings of 2/3 of the minimum wage or more).

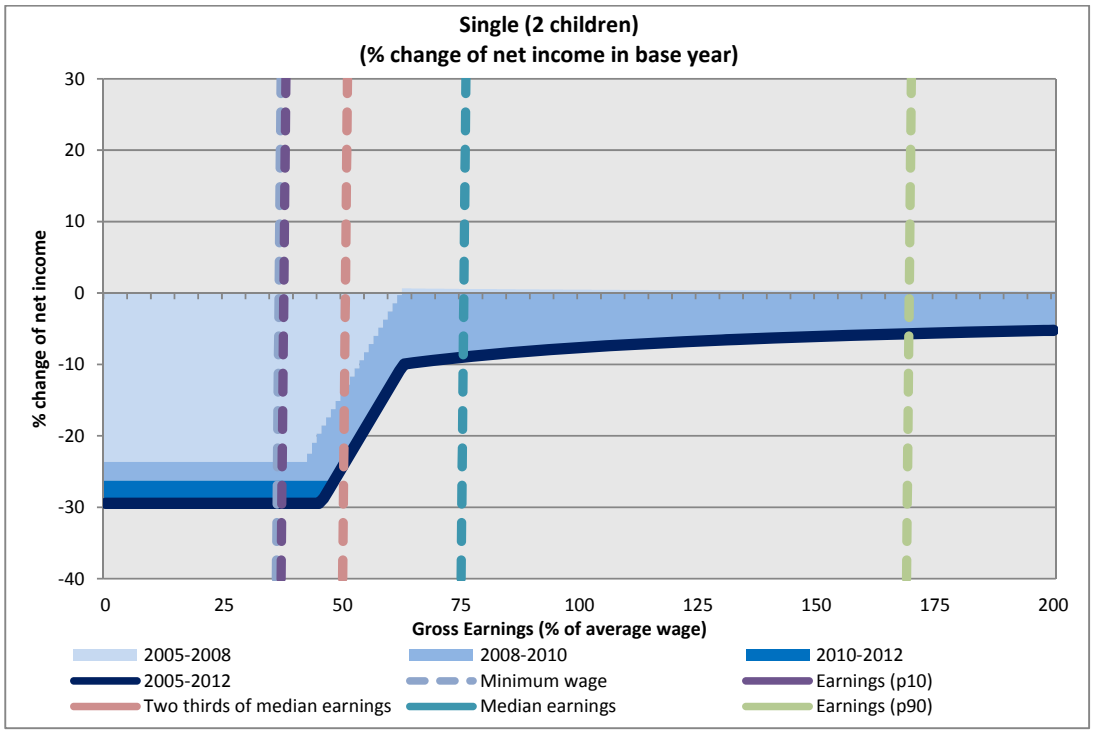
Between 2010 and 2012, net benefits fell for all family types. But changes were comparatively small and driven by a lack of benefit adjustments, rather than by specific legislative policy initiatives.

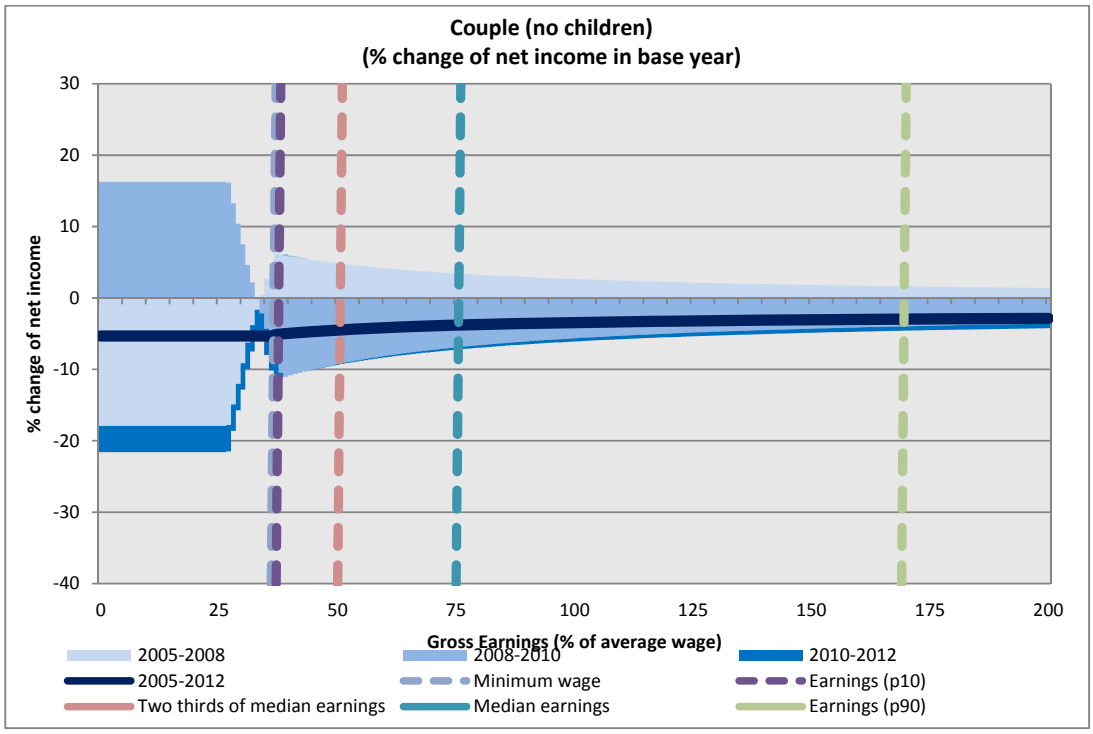
Over the 2005 to 2012 period as a whole, the combined effects of pre-crisis, crisis and post-crisis policy was a significant reduction in net benefits for all family types and at all earnings levels. Low-earning families with children saw the greatest reduction in net benefits. For childless families, losses were both less sizable and more equally distributed across the earnings range. When interpreting these results, it is, once again, important to emphasize that they capture *only* the effects of taxes and transfers. Families who also suffered drops in their earned income will have experienced far greater income losses.

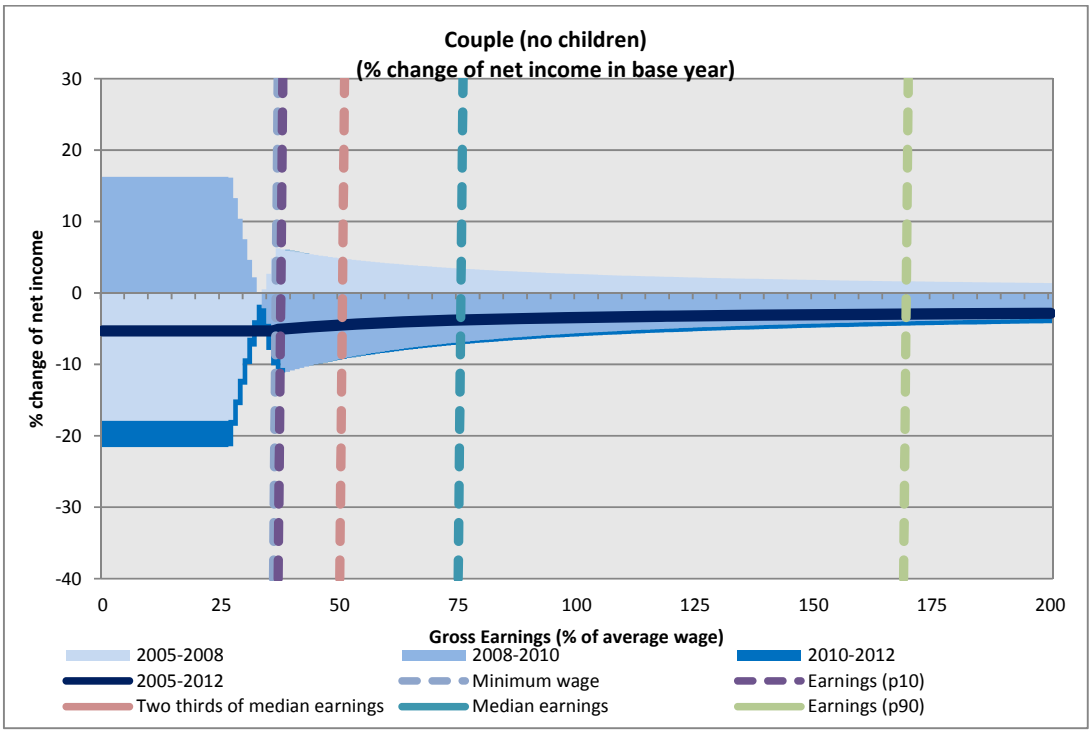
Figure 7: Changes in net incomes for different household types (2005-2012)



[11] When program rules or benefit levels can vary within a country, a "representative" region is used in the OECD tax-benefit model. Since in Latvia the GMI program benefit levels can vary by municipalities, the rules applicable to the City of Riga are used.


Single (2 children)
(% change of net income in base year)
% change of net income
30
20
10
0
-10
-20
-30
-40
0
25
50
75
100
125
150
175
200
Gross Earnings (% of average wage)
2005-2008
2008-2010
2010-2012
2005-2012
Minimum wage
Earnings (p10)
Two thirds of median earnings
Median earnings
Earnings (p90)


Couple (no children)
(% change of net income in base year)
% change of net income
30
20
10
0
-10
-20
-30
-40
0
25
50
75
100
125
150
175
200
Gross Earnings (% of average wage)
2005-2008
2008-2010
2010-2012
2005-2012
Minimum wage
Earnings (p10)
Two thirds of median earnings
Median earnings
Earnings (p90)



Notes: Gross earnings are in percent of the average full-time wage in the private sector. In the European Union, two thirds of the median wage is frequently used as a "low-wage" cut-off and the graph therefore highlights this point in the earnings distribution alongside the minimum wage and the 10th, 50th and 90th percentile. Income changes are shown relative to tax and benefit policies of the base year indexed for earnings growth. Calculations relate to families who do not receive any unemployment or social insurance benefits. Instead, and subject to relevant income limits, they may be entitled to means-tested assistance benefits. Children are assumed to be aged 4 and 6. See text for details.

Sources: Authors' calculations using OECD tax-benefit models. Earnings distribution data for full-time wage earners are taken from Eurostat.

Box 2: Main changes to social benefits in Latvia during and after the crisis

Family State Benefit

On July 1, 2009, the Family State Benefit amount was limited to 8 LVL per child regardless of the number of children in a family (previously, it ranged up to 14.40 LVL per 4 and more children). This was initially a temporary measure set to expire on December 31, 2012. However, currently differentiation is being planned to resume only starting January 1, 2015. Additionally, since May 2010, the benefit is only awarded when the child is at least one year old.

GMI program

In response to the crisis and increasing need for income support, the Government increased GMI benefit duration. Before July 2009, the total duration GMI benefit could not exceed nine months in a calendar year.[1] Starting from July 2009, amendments were made in the Law on Social Services and Social Assistance and these restrictions were abolished. Additionally, since December 2009 the GMI benefit was increased from 37 LVL per person to 40 LVL per person for adults and 45 LVL for children under 18[2]. Previously applied maximum amount of the GMI benefit per family (135 LVL per month) was also abolished. Along with co-financing by the Central government, these adjustments allowed for the program to expand in light of increasing demand, although with some delay (Isik-Dikmelik 2012).

At the same time, however, a number of changes were made to the income test to limit the budgetary impact. In particular, starting from December 2009, Family State benefit which for a time (since October 2008) did not count in the income test for the GMI benefit, was again included as income for the purposes of calculating the GMI benefit amount.[3]

Social insurance benefits

The Government also implemented several policy changes in the area of social insurance benefits. As mentioned above, unemployment insurance duration has been extended for all unemployed regardless of contribution history. At the same time, some measures were introduced to cap earning-related benefits for high wage earners. In November 2010, a new cap on the benefit amount for several insurance benefits was introduced. Specifically, if a daily benefit amount for maternity, paternity and parental benefits exceeds 11.51LVL, the difference between awarded benefit (equal to 80%, 80% and 70% of average contribution wage, respectively) and 11.51 LVL is paid at 50 percent.

The same cap from January 1, 2010, was applied to the unemployment benefit and sickness benefit. This measure was set to expire at the end of December 2014. But from January 1, 2013, till December 31, 2014 a daily benefit amount for maternity, paternity and parental benefits exceeds 23.02 LVL, the difference between awarded benefit (equal to 80%, 80% and 70% of average contribution wage, respectively) and 23.02 LVL is paid at 50 percent.

Notes: [1] The benefit is granted for 3 months and is renewable after that.

[2] Municipalities are allowed to determine the level of GMI for persons, receiving old-age pension or disability pension, but not below 40 LVL and not above 90 LVL per month.

[3] In January 2012, the scope of income disregards was further reduced by including the following benefits in the income test: child care benefit and supplements, the first 50 LVL from the parental benefit and supplement to parental benefits for multiple births, unemployment fellowship training.

Source: OECD Benefits and Wages, Ministry of Welfare.

3 Work disincentives and their consequences

How to strike a balance between public support and encouraging adaptability and self-sufficiency is one of the most crucial questions in social and labor-market policy. After a deep recession, the stakes are especially high and the persisting labor market weakness has brought new urgency to the search for effective support for those without a job, and for those making the transition back to work.

While there is clearly a much greater demand for income support, concerns about insufficient work or job-search incentives may also become more pressing as lengthening out-of-work spells weaken the earnings potential of jobseekers. For instance, youth and new labor-market entrants are typically

found to command much lower entry wages during a recession.[12] Regardless of age, long-term unemployed typically see their earnings potential decline through a combination of discouragement and depreciating human capital. Reduced earnings prospects could lead to jobseekers reducing their job-search efforts, and possibly to a vicious cycle of deteriorating earnings potential and lengthening jobless spells.

The comparatively low benefit levels that were shown for Latvia in the previous section suggest that income support measures create significantly fewer problems in terms of work incentives than in other countries. This section will take a closer look at this question. It first discusses evidence on the effects of work incentives on employment outcomes. A second part then examines financial incentives for different population groups and for different types of employment.

3.1 How important are financial (dis)incentives for employment outcomes?

Even though results are not available for all countries, there exists a broad agreement among labor economists about the responsiveness of people's employment decisions to financial work incentives (such as the net income gain of working one hour more or of working at all).[13] Among the main findings are the following:

- Financial incentives affect the total amount of work and earnings mainly through the decision of whether or not to work at all.
- Changes in the number of hours worked for those already in employment (e.g., as a result of tax increases or benefit losses that result from earning a little bit more) are less sizeable;
- Low-income groups and lone parents react more strongly to financial incentives; and
- Labor supply is more responsive (or "elastic") for women than for men.

These results are important when considering the potential economic cost of reforming out-of-work support programs, and for deciding how best to target so-called “make-work-pay” policies. For instance, for a given amount spent on in-work benefits, targeting these resources on women and low-income groups, especially when children are present, is likely to create the biggest payoff in terms of stronger employment and higher earnings.

But while some general patterns emerge from the international evidence, it is notable that findings often differ substantially across countries. For instance, one of the few available cross-country empirical studies reports that observed employment outcomes of single women in Hungary and Poland are only about 1/4 as responsive to financial incentives as in Ireland and the United Kingdom (Bargain and Peichl, 2011). Apart from differences related to data and measurement, one important explanation for large country differences is that incentives may have limited relevance for observed employment outcomes if other barriers prevent people from adjusting their labor-market status or working hours. For instance, when involuntary unemployment is high during a downturn, many individuals who *want* to work cannot find a suitable job. Frictions in the labor market (e.g., due to poorly functioning public employment services or skills mismatches) can have similar effects. On the other hand, policies that tie benefit receipt to job-search or active participation in active labor market programs (ALMPs) can help to avoid negative employment effects that would otherwise result from unconditional out-of-work benefits.

Given the present study’s focus on long-term unemployment, a particularly relevant question is the effect of income support on out-of-work durations. Although measurement approaches[14] and findings

[12] Oreopoulos *et al.* (2006); Kahn (2010).

[13] A survey of results from around 40 studies is provided by Evers *et al.* (2008) and Immervoll *et al.* (2007).

[14] For instance, most studies measure benefit levels in terms of gross replacement rates instead of the conceptually correct net replacement rates shown in Table 1 and Figure 3 above.

differ, there is a consensus that more generous benefits do lead to a measurable lengthening of jobless spells *for the individual concerned*.[15] This is true whether changes are due to benefit levels (replacement rates) or benefit durations.

Many studies find modest to moderate effects, however.[16] Importantly, greater changes in generosity create disproportionately stronger effects, both theoretically and empirically.[17] This may be one reason why studies in countries with more generous unemployment compensation, such as the Nordic countries, frequently find stronger incentive effects of changes in benefit generosity.[18] It also implies that increasing benefits from a low base, or introducing modest benefits for unemployed who are currently not covered at all, is likely to produce only fairly mild adverse effects on job finding rates.

In summary, more generous benefits do lengthen out-of-work spells for benefit recipients. Effect sizes are often small, however, and need to be weighed against the objectives of providing adequate income security for job losers. Importantly, and as discussed in Box 3, there are a number of reasons why lower job-finding rates among benefit recipients should not be expected to translate directly into changes in *economy-wide unemployment* of a similar magnitude—especially in countries where out-of-work support is currently limited and benefit durations are short.

3.1.1 Work disincentives are unlikely to be the main employment barrier after a deep recession

Most of the costs and benefits of unemployment compensation can be expected to vary over the economic cycle. In the current economic context, the design of out-of-work support during periods of persistent labor-market weakness is a crucial issue from a policy perspective and many countries have, indeed, embarked on reforms in the past three to four years.

For instance, several countries have increased benefit amounts or maximum benefit durations (e.g., Canada, Iceland, Latvia, Luxembourg, Portugal, Slovenia, Romania and the United States), either as a temporary crisis measure, or as part of structural reform packages. Other countries have instead cut benefit levels (e.g., Croatia, Lithuania), shortened benefit durations (e.g., Denmark), or both (Ireland). Latvia has capped benefit levels for high-income workers and extended durations for those with shorter employment histories. The Czech Republic has increased benefits but cut durations[19].

There are good social as well as economic arguments for modifying benefit provisions when labor-market conditions change substantially. It is clear that there is a greater need for unemployment support when job losses mount and labor markets remain slack for extended periods. With reduced job-finding rates, a given job-seeker remains unemployed for longer periods of time. Extending benefit durations can therefore help to ensure that unemployment compensation systems *(i)* continue to facilitate a reasonable match between jobseeker and vacancies, and *(ii)* provide effective income support during the jobless spell.

But since more generous benefits reduce job-finding rates, do such adjustments lead to a significant worsening of labor-market outcomes that would further exacerbate labor-market problems and delay a recovery? Recent research in the United States and in Europe provides useful pointers for thinking about this question (Landais *et al.*, 2010; Schmieder *et al.*, 2012). According to those studies, the adverse effect of benefit generosity on *individual* job-search is indeed about the same in recessions and in booms. But, importantly, the intensity of job-search makes, in fact, less of a difference to

[15] See Krueger and Meyer (2002) for a survey of early studies.

[16] For instance, in a well-known study of a large policy change in Austria, Lalive *et al.* (2006) find that increasing benefit levels (as measured by the gross replacement rate) from 41 percent to 47 percent (an increase of 15 percent) lengthens expected out-of-work durations by 0.4 weeks (from 20.6 to 21.0 weeks, an increase of 2 percent). In percentage terms, the effect of extending maximum benefit durations is in the same order of magnitude (e.g., plus 0.8 weeks for an extension of the benefit duration of 9 weeks, or 30 percent).

[17] For instance, in the Austrian study, a 22 week extension of the maximum benefit added almost 6 weeks to the expected jobless spell.

[18] Røed, K. and Zhang (2003), Carling *et al.* (2001).

[19] See OECD (2009; 2011b) and European Commission (2011).

employment outcomes when there are long queues of job-seekers and a much-reduced number of vacancies. This argument says that *aggregate* unemployment is less sensitive to changes in benefit generosity when labor markets are weak.[20] In countries where this is the case, the efficiency costs of providing support would then be no greater (and perhaps smaller) in recessions. At the same time, the need for benefit support is greater, so the cost/benefit ratio of unemployment support would be more attractive when unemployment is high.

Box 3. What do longer jobless spells mean for overall labor market performance?

There are a number of reasons why lower job-finding rates among benefit recipients should not be expected to translate directly into changes in *economy-wide unemployment* of a similar magnitude – especially in countries where out-of-work support is currently limited and benefit durations are short. The most obvious reason is that many unemployed in fact do not receive benefits, as is the case in Latvia. As a result, their job search behaviour is not immediately affected by more generous benefits. Making unemployment support more generous can in fact *strengthen* work incentives for jobseekers who do not qualify (because they have more to gain from seeking to qualify for benefits in possible future unemployment spells, Holmlund, 1998). The potential importance of such an "entitlement effect" is stronger when benefit coverage is low.

Second, and related, greater benefit generosity may to some extent affect the composition, rather than the level of unemployment: "Suppose for example that […] we observe that persons with higher benefits exit unemployment more slowly. This does not necessarily mean that aggregate unemployment is higher since the refusal of jobs by one group may lead to the work being offered to others. In other words it is the composition of unemployment which is altered." (Atkinson and Mickelwright, 1991, p.1710). Again, this "composition effect" is more likely to be sizeable in countries where benefit coverage is low.

Third, although long-term unemployment is very costly and clearly damages future career prospects, there is evidence that unemployment benefits improve job *quality* by allowing jobseekers more time to actively search for a good match with available job offers (indeed, this one of the main rationales for providing unemployment compensation). Recent studies show that reducing job mismatch can substantially improve employment stability and other employment outcomes, such as future wages.[a]

It is therefore important to keep in mind that studies on incentives and jobless spells, such as the results from Austria given in footnotes 14 and 15 above, focus on the effects of unemployment benefits on the job search of *benefit recipients*; they do not capture effects on the employment behaviour of those not covered by benefits, or the effects of a reduced inflow into unemployment due to, say, greater employment stability. While the extents of "composition" and "entitlement" effect are rarely examined explicitly, there is indeed some evidence that effects of benefit generosity on *aggregate unemployment* are smaller than effects on the behaviour of individual benefit recipients (Landais *et al.*, 2010).

More fundamentally, any adverse effect of benefit generosity on unemployment duration has to be weighed against the objectives of providing unemployment benefits in the first place, namely, their function as an automatic stabiliser, and the insurance value of "smoothing" consumption and sharing unemployment risks across a large number of workers.

[a] Centeno (2004), Petrongolo (2009), Tatsiramos (2010), Caliendo et al. (2012).

[20] Landais *et al.* (2010) cite evidence for this for the United States and the United Kingdom. A more recent US study provides a thorough review of factors contributing to persistent labour-market slack and finds that the very sizeable extension of unemployment insurance has had a very modest impact on unemployment rates (Rothstein, 2012). It is worth noting that a finding of more sizeable effects on measured unemployment does not necessarily point to an equally large reduction in job-search intensity. Instead, part of the increase in unemployment can be due to the continued job search by individuals who would have dropped out of the labor force had benefit durations not been extended.

3.2 Does the current tax-benefit system "make work pay"?

In Latvia, the combination of relatively short duration of unemployment insurance benefits, even after the extension to 9 months,[21] relatively low unemployment benefit coverage, and the lack of a follow-up unemployment assistance, make it unlikely that current levels of unemployment compensation present a major work incentive issue. When unemployment durations increase after a major downturn, the less time-limited means-tested social assistance and housing benefits take on a more central role as out-of-work support. This section therefore discusses work incentives with a particular focus on those entitled to these means-tested benefits

To analyze financial work incentives we use the so-called "budget constraints," which provide an in-depth view on the features of tax-benefit systems.[22] By plotting net incomes on gross income components, one can compare net transfers (benefits minus taxes) across household types. These graphs are also useful to analyze the composition of net household incomes. This is done by disaggregating household net income in order to indicate the impact of each individual tax and benefit instrument. Net incomes as well as its components are shown for levels of gross earnings ranging from 0 to 200 percent of average worker wages (AW).

Gross earnings, last-resort social assistance, housing benefits and family benefits are shown as positive income components above the horizontal axis while income tax and own social security contributions reduce net income and are therefore shown as negative components below the horizontal axis. Marginal effective tax rate (METR), or the rate at which any additional gross earnings are "taxed away" by the combined effects of taxes and benefit withdrawals, can be seen by comparing the slope of the budget constraint to that of the gross income line[23].

The budget constraint graphs therefore can also be used as an illustration of marginal effective tax rates. If a small increase in gross earnings results in no change in net income, the net income line is horizontal indicating that the entire earnings increase is absorbed by higher taxes and lower benefits (the METR is 100 percent). On the other hand, a net income line that is parallel to gross earnings means that the full amount of additional gross earnings adds to net income (the METR is zero). Any downward sloping portions of the net income line indicate situations where additional earnings imply falling net incomes, which correspond to METRs in excess of 100 percent. The distance between net and gross incomes indicates the size of effective tax burdens. Where net incomes exceed gross earnings, the family receives more benefits than it pays in taxes. Where the two lines cross, total benefits equal total taxes (and the effective tax burden is zero).

3.2.1 Means-tested benefit recipients face high marginal effective tax rates

In Latvia, the GMI benefit and the housing benefit are designed with a 100 percent marginal effective tax rate on earnings, i.e. the benefits decrease by 1 lat for each additional lat earned. As a result, on earnings ranges where households are eligible for either or both of these benefits, earners face an METR of 100 percent (Figure 8, right axis). Such a design could contribute to the so called low-wage traps, when it does not pay off for low-wage earners to increase working hours or move to marginally higher paid employment if all additional earnings are "taxed away". [24] Subsequent to that, the METR is determined by a combined burden of income taxes and social security contributions, both of which amount to approximately 33 percent.[25]

[21] Made permanent from January 1, 2013, for all unemployment benefit recipients.

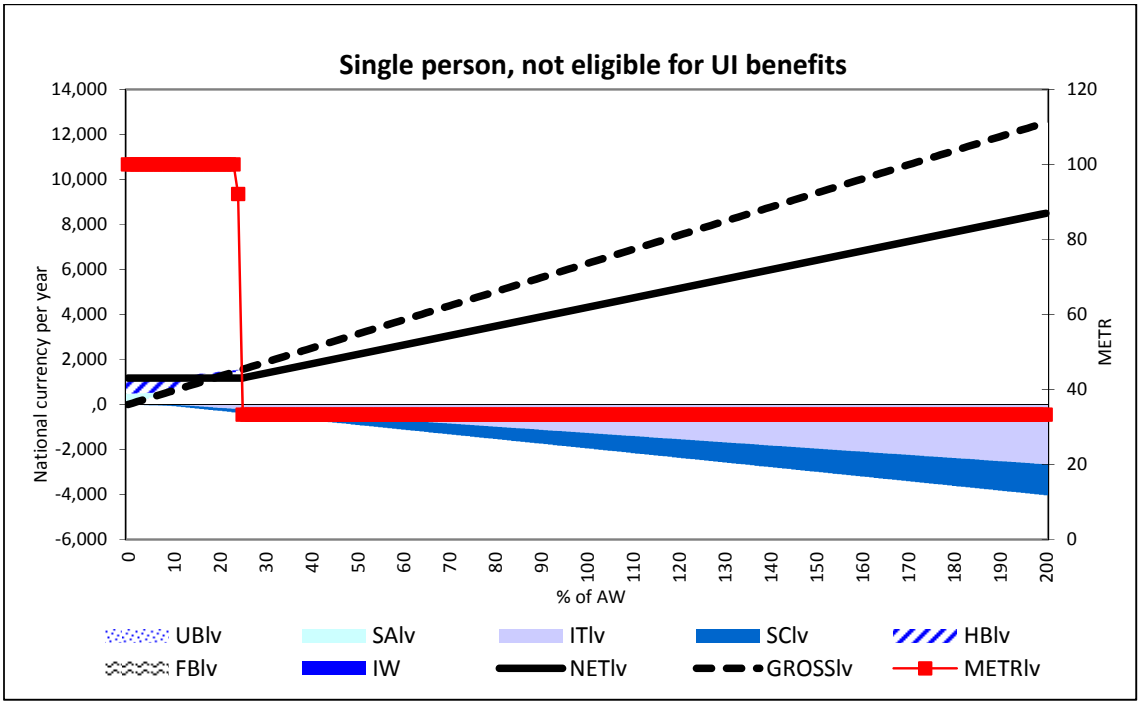
[22] OECD (2007).

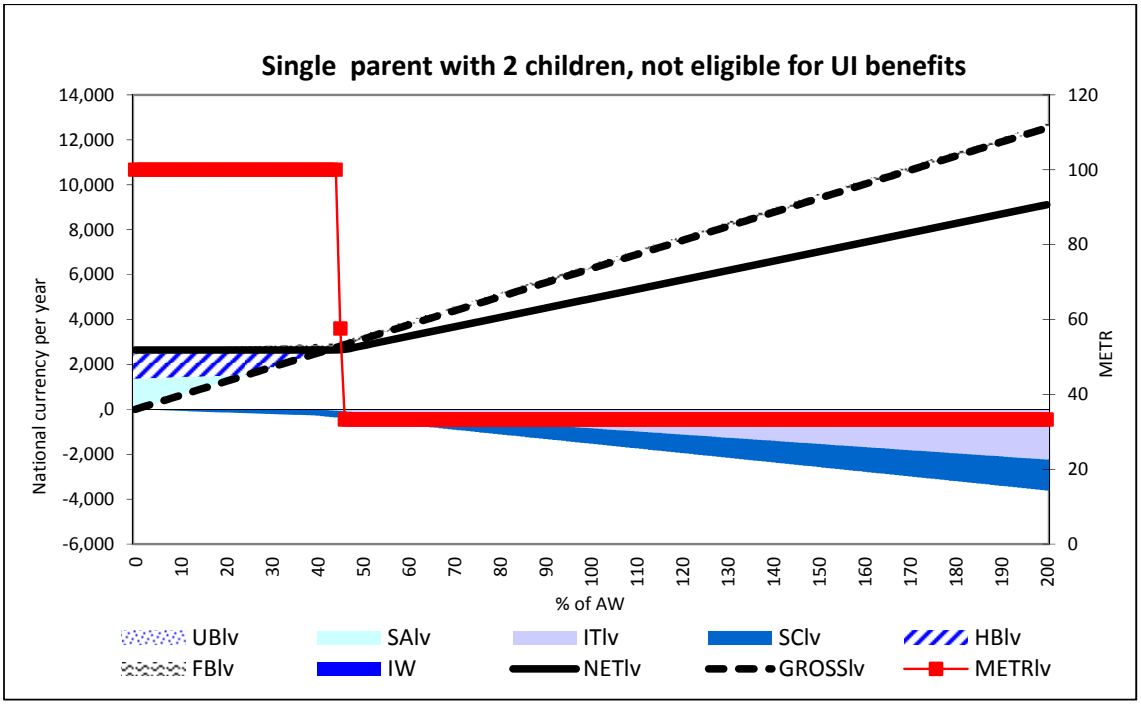
[23] Technically, the METR is defined as (1 – Δne/Δge) where Δne is equal to the change in net earnings, and Δge is the change in gross earnings experienced by the household.

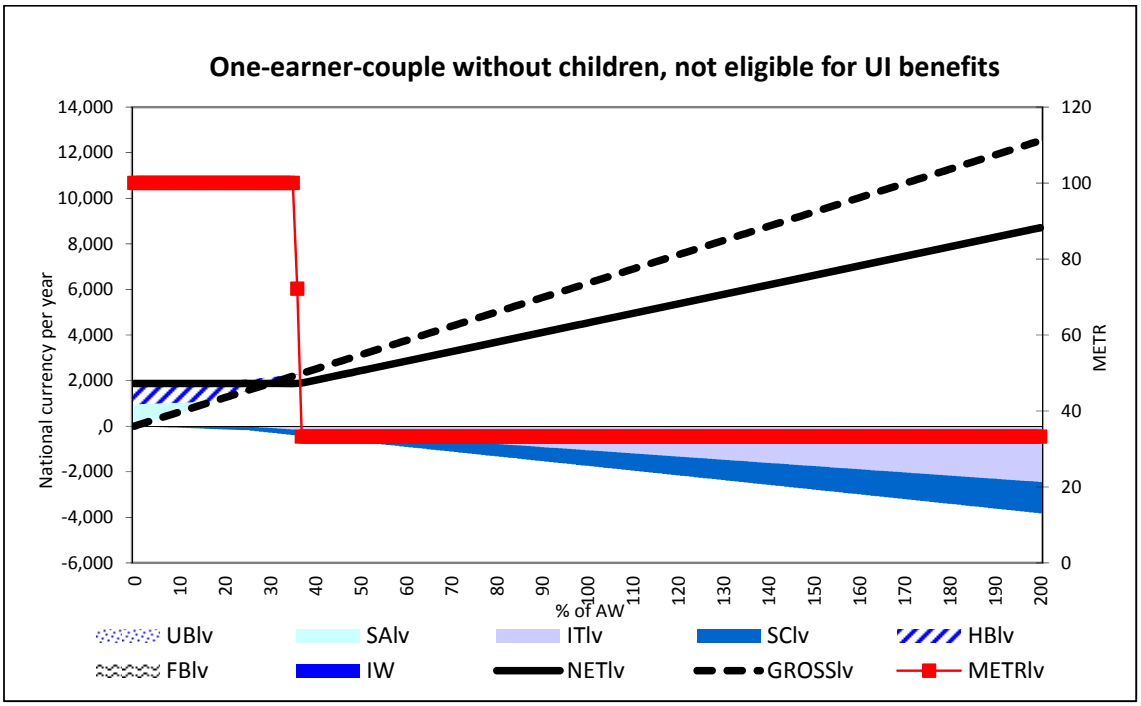
[24] See Table A5 for METRs for average of marginal effective tax rate at different wage levels.

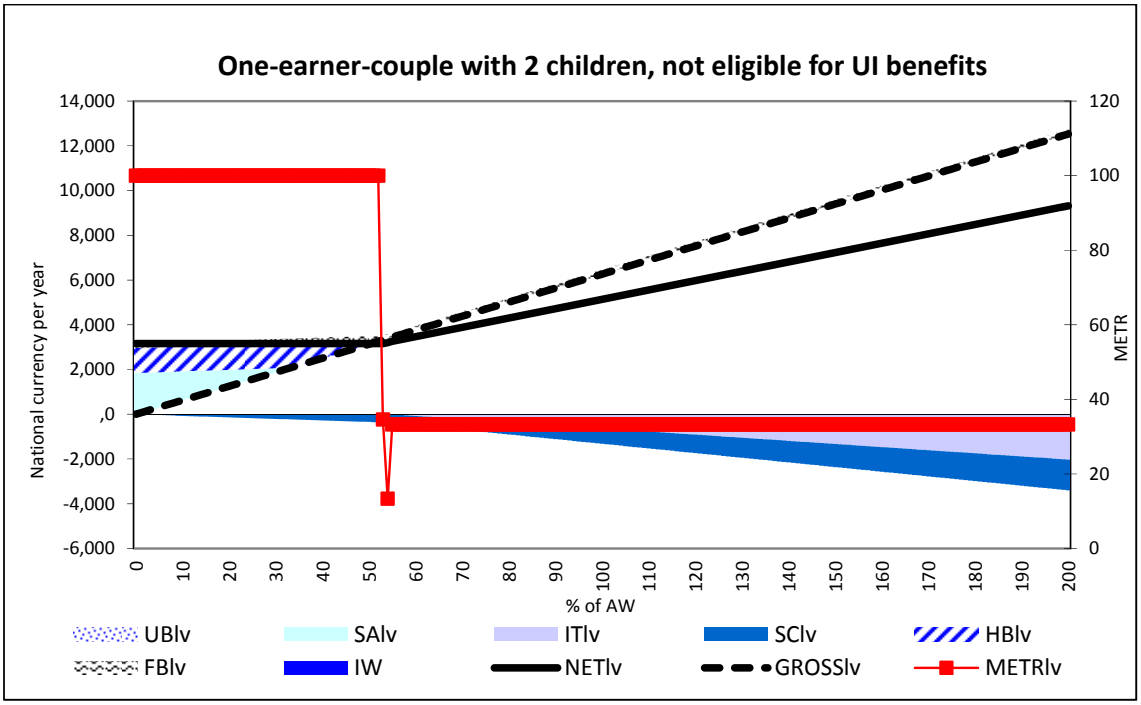
[25] Tax rate (income tax and social security contributions) after any tax-free allowances.

Figure 8: Budget constraints for different household types in Latvia, 2012









Notes: UI: Unemployment insurance, UBlv: Unemployment benefit, FBlv: Family benefit, SAlv: Social assistance (GMI program), IW: in-work benefits (if applicable), ITlv: Income tax, NETlv: Net income, SClv: Social security contributions, GROSSlv: Gross income, HBlv: Housing benefit, METRlv: Marginal effective tax rate, lv suffix is for Latvia.

Sources: Authors' calculations using OECD tax-benefit models.

3.2.2. Financial incentives to take up employment can be improved for low-wage earners

Participation tax rates, also known as the inactivity trap, measure the part of additional gross wage that is taxed away in the case where an inactive person (not entitled to receive unemployment benefits but eligible for income-tested social assistance) takes up a job. In other words, this indicator measures the financial incentives to move from inactivity and social assistance to employment.

Figures 9 and 10 show participation tax rates for Latvia compared to other OECD countries for different household types. Participation tax rates are particularly high in Latvia for low wage earners (at 33 percent of average wage). For all considered household types, with the exception of singles, average effective tax rate (AETR) for taking up a low paying job is 100 percent. However, even for higher paying jobs (such as those at 67 percent of average wage), METR is as high as 80 for some household types.

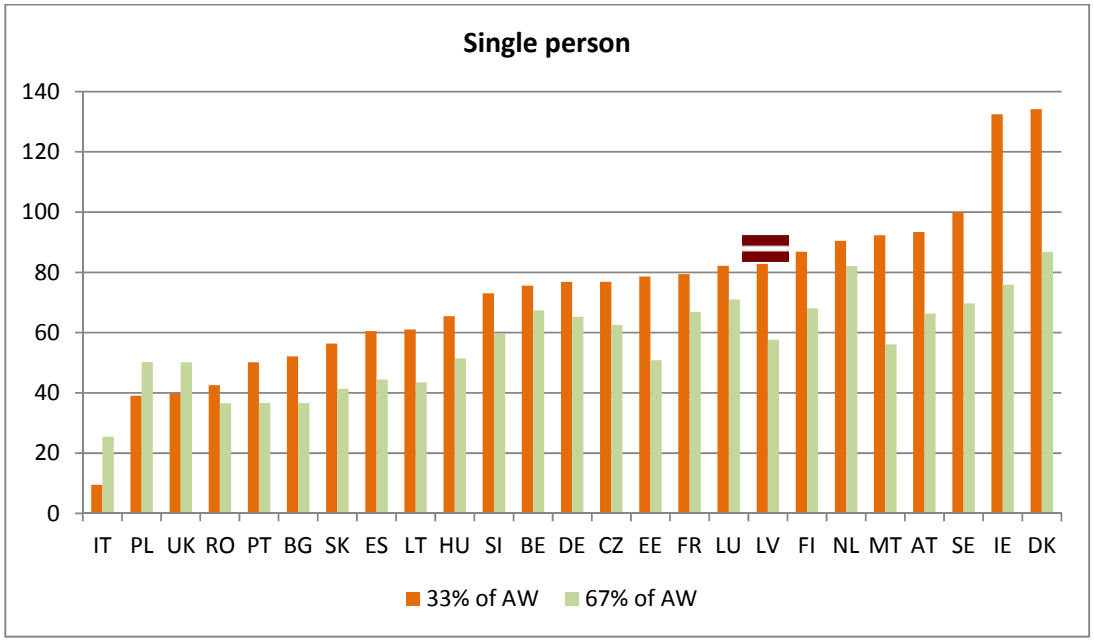
However, these calculations assume that in an out-of-work situation, households received minimum-income support and the housing benefit. In practice, coverage of these programs is very low. Besides income, these programs could have other criteria, which not all low-income households may be able to meet (such as asset tests). Hence, these participation tax rates apply only to those who are beneficiaries of social assistance (GMI and housing benefit).

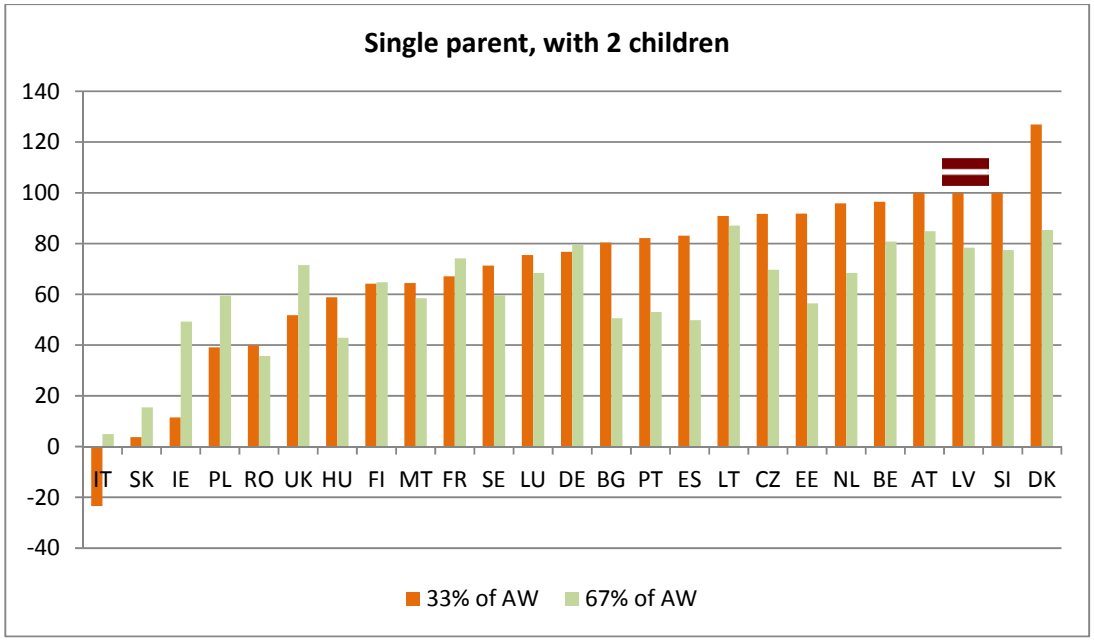
Figure 10 illustrates that for those who received social assistance benefits, the participation tax rate is primarily driven by withdrawal of these benefits. At higher earnings levels, social security and contributions play a bigger role contributing a larger share to the overall participation tax rate.

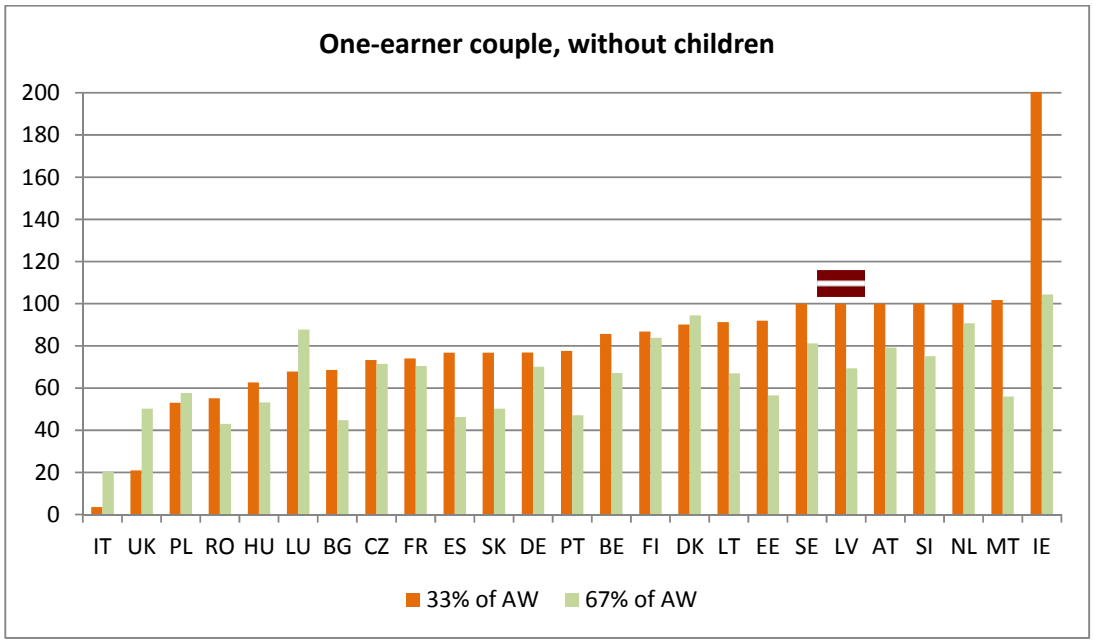
Hence, the design of social assistance benefits could be improved to increase incentives to take up low paid jobs. These can be accomplished through an introduction of income disregards, whereby some earnings are not taken into account for the purposes of calculating the GMI benefit and the housing benefit (see Table A1 for examples in other countries) or “back to work” bonuses or other in-work benefits (discussed in Section 4).

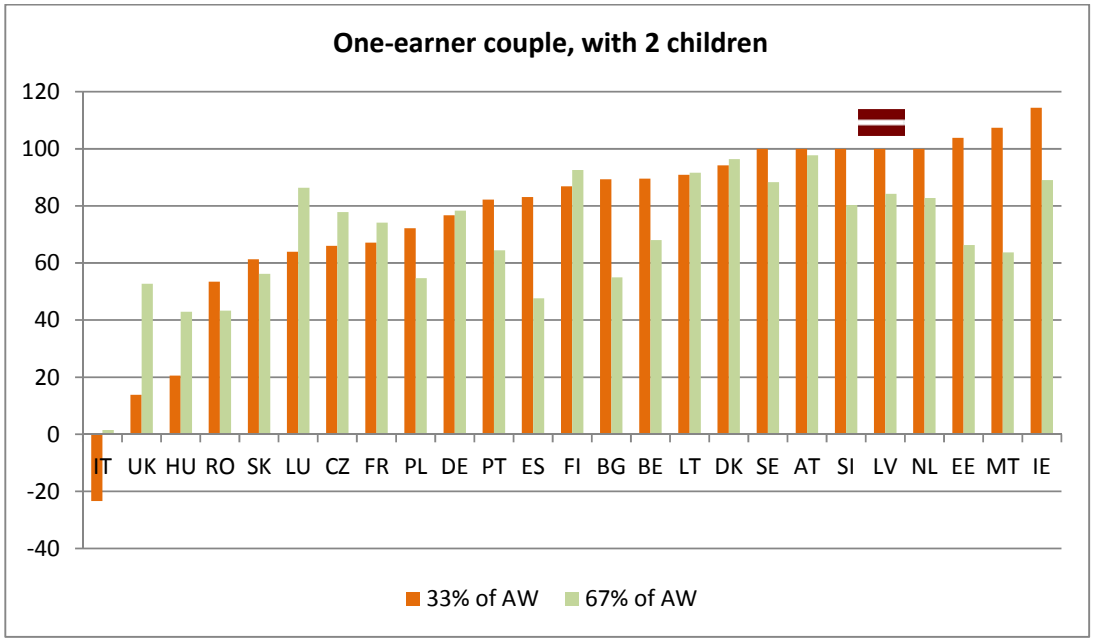
Furthermore, another potential implication of high participation tax rates is that for certain groups of population, such as low wage earners, it may not pay off to take a *formal* job, while it may be beneficial to combine social assistance with some unreported earnings. This issue is discussed in the next section.

Figure 9: Participation tax rate (average effective tax rates) in 2011





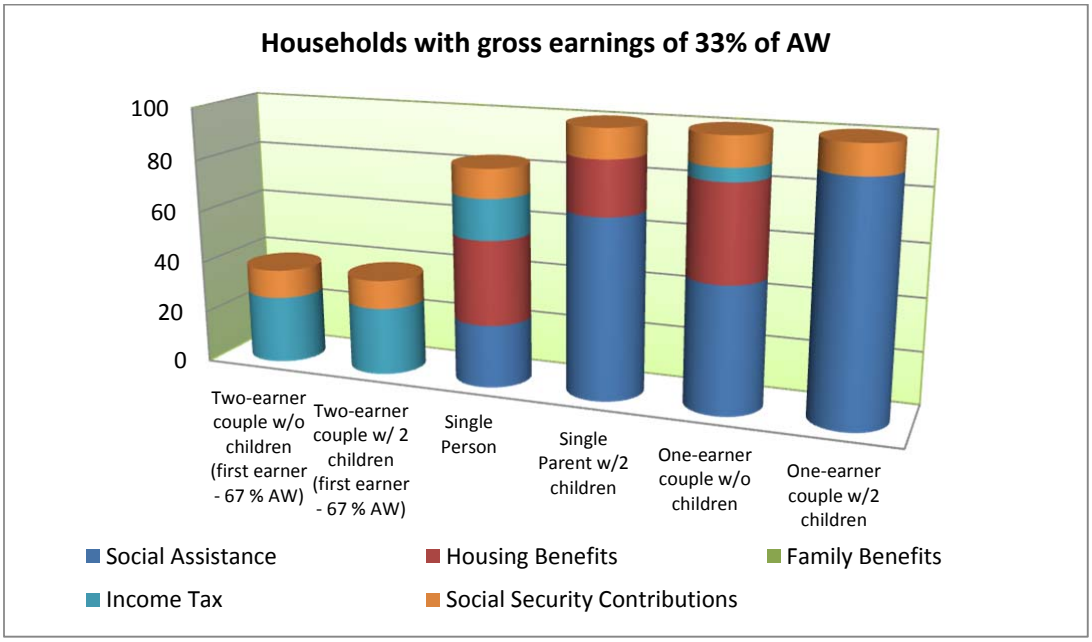


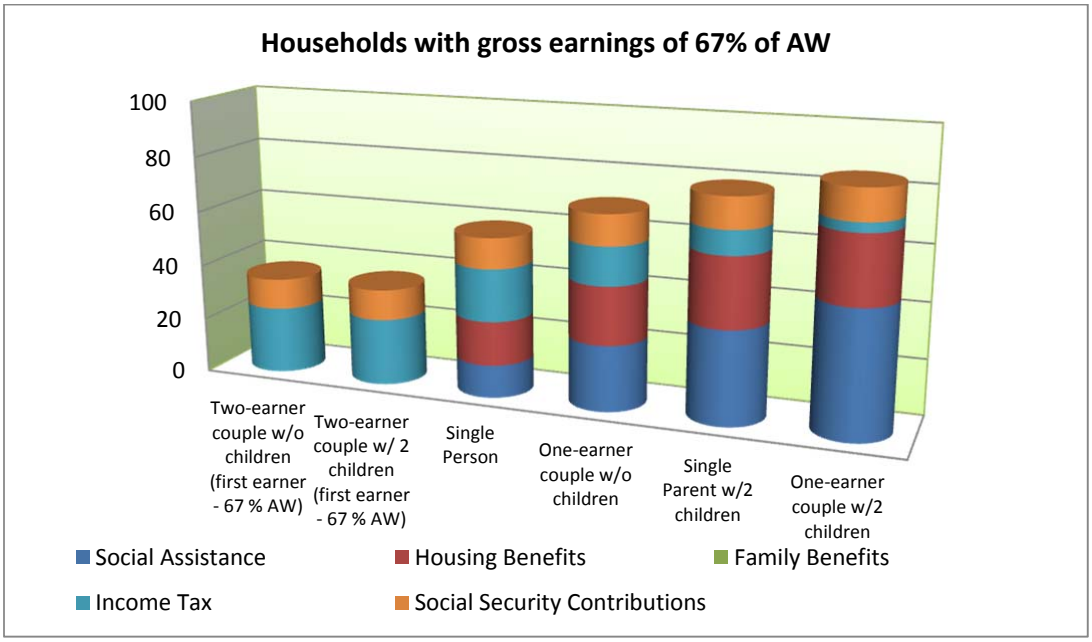


Sources: Authors' calculations using OECD tax-benefit models.

Notes: AW refers to Average Wage.

Figure 10: Decomposition of participation tax rate in Latvia in 2011 by source





Sources: Authors' calculations using OECD tax-benefit models.

3.2.2 Financial incentives considering non-reporting and under-reporting

Informality presents a serious issue for policymakers in Latvia. One of the prevailing concerns is that it is possible to combine out-of-work income support with informal earnings, hence undermining incentives to take a formal job. Another concern is that a significant share of employees under-report incomes by being officially paid a minimum wage while receiving additional "envelope wages, i.e. cash payments unreported to tax or social security authorities.

The extent of informality in Latvia is hotly debated and estimates based on different methodology and data produce different results. Hazans (2011) estimates that only about 5 percent of all employees work without a contract in Latvia, while the share of informality among the self-employed is much higher. Two thirds of those defined self-employed can be characterized as informal, i.e. those self-employed who employ less than 5 workers and those who don't work independently in professional occupations (such as doctors, lawyers, and other professionals). Even taking into account that as many as two thirds of self-employed work without a contract and those who are unpaid family workers, overall share of informal workers in Latvia is estimated at only about 10 percent.[26] Based on a special 2007 Eurobarometer,[27] self-reported estimates of undeclared work are 15 percent (European Commission, 2007). The extent and degree of underreporting is even more difficult to capture. Among dependent employees 17 percent admitted to having received "envelope wages" (European Commission, 2007).

Causes of informality are complicated and have been studied extensively. Koettl et al. (2012) provide a detailed study of informality in EU new member states, including Latvia. The extent to which taxation and design of social benefits contribute to informality is also subject to debate. Koettl and Weber (2012) use a measure of financial incentives to take up formal jobs—formalization tax rate (FTR). FTR incorporates both the effects of taxation and withdrawal of any benefits which those who are informally employed may be receiving and which they may have to give up should they take a formal job. They find that for low wage earners, for whom opportunity cost of formal work is highest, a 1 percentage point increase in the FTR increases the probability of being informal by 2.2 percent.

It is, therefore, important to factor in the possibility of informal work and under-reporting when considering financial incentives to work. Specifically, when one assumes that people can under-report a certain amount of earnings, this actually would increase financial incentives to take up jobs relative to the situation when all earnings are reported. For instance, if a single person receiving the GMI and the housing benefits takes a formal minimum wage job, they will only be able to gain approximately 25 percent of their gross earnings, since the rest will be "taxed away" through taxes and social contribution, but most importantly through withdrawal of the social benefits. However, if a person can receive a certain additional amount of earnings informally, their expected gain from taking such a job would be higher by the same percentage as they share of informal earnings (i.e. if METR is 75 percent, it would be 65 percent if 10 percent of gross formal earnings is not reported).

The possibility of under-reporting also alleviates the extent to which it may not pay off to those who can receive social assistance while working informally to take up formal jobs. For example, if a single person can receive social assistance while working informally and receiving an equivalent of gross minimum wage in an "envelope", they would have no financial incentive to move to a formal minimum wage. In this situation, they actually stand to lose, because not only their earnings would be taxed and would be subject to social security contributions, but they also would lose any social assistance benefits they were eligible (or the amount would decrease significantly). However, if we also assume that those who work informally also tend to under-report while being employed formally (and vice versa), they would stand to gain more from moving to a formal job.

It is important to keep in mind that possibility to combine informal work and social assistance benefits in Latvia can be quite limited given the low coverage of these benefits. Additionally, low benefit generosity also undermines the attractiveness of this option given that applying for and qualifying for benefits imposes costs on applicants (costs related to applying for benefits, which increase with frequency of recertification,[28] any participation requirements on the part of the claimants).

While it is not possible to perfectly capture informal status using household survey data, available estimates show that incidence of these benefits among informal workers in Latvia is quite low. For

[26] Estimates based on European Social Survey data fielded in Latvia during second quarter of 2009. See Hazans (2011).

[27] Survey fielded in May-June 2007.

[28] In Latvia, recertification for the GMI program and social assistance benefits is every 3 months.

instance, among all informal employees[29] only about 7 percent received the GMI benefit and less than 12 percent received the housing benefit in 2010.[30] Conversely, only 19.3 percent of GMI beneficiaries of working age (19 to 64 years of age) and 12.5 percent of those receiving the housing benefit could be classified as informal employees.

Among self-employed (since they tend to be informal[31]), the incidence of these transfers is much lower. Only 2.7 percent of self-employed received the GMI and 4.4 percent received the housing benefit in 2010. Self-employed are also not more likely to be among the beneficiaries of these benefits, as only about 5 percent of GMI beneficiaries of working age were self-employed (and 3.4 percent of the housing benefit recipients).

Hence, the share of population for whom there could be significant financial disincentives to taking up formal jobs (as well as any jobs) is relatively small. Nevertheless, to mitigate financial work disincentives as well as provide additional income support for low wage earners, most developed countries implemented certain policies to "make work pay," which include in-work benefits such as tax-credits, as well as redesigned their social assistance benefits to encourage beneficiaries to take low-paid jobs and connect them with the labor market. These policies and their appropriateness given Latvian context are discussed next.

4 "Make Work pay" policies: Rationale and policy approaches

4.1.1 What do OECD countries do?

The twin objectives of supporting the living standards of low-income families and encouraging economic self-sufficiency can be in conflict with one another, so trade-offs have to be made. OECD countries have increasingly introduced measures aimed at improving the terms of this trade-off by accentuating financial work incentives while maintaining adequate support for those with no or very low earnings. Design features of so-called **"make-work-pay" policies** that seek to ensure incentive compatibility of social protection measures can take different forms and practically all OECD countries operate such policies of one form or another.

For instance, most countries operate **gradual benefit phase-outs** for individuals who manage to earn only limited amounts (e.g., by working a few hours while looking for a higher-paying job). Disregarding a certain part of earnings in relevant income tests, or ignoring marginal working hours in the eligibility test of out-of-work benefits, can indeed provide strong incentives to supplement benefit income with a small amount of earnings and to seek or maintain at least some link with the labor market. In a few countries (e.g., Australia) the specificities of benefit phase-outs were arguably designed to facilitate non-marginal employment. But often, they do not provide a genuine incentive to increase employment incomes further; steep benefit phase-outs above "marginal" earnings levels, combined with relatively high tax or contribution burdens for non-marginal workers can create potential low-wage traps and concerns that incentives for moving to better-paid jobs can be limited (for instance, OECD calculations show that the net income of a German single parent is about the same whether she earns 10% or 66% of the average wage).

Partly to address these problems, an increasing number of countries are considering employment-**conditional ("in-work") benefits** or **tax credits** that support the incomes of workers in non-marginal

[29] Defined here as those working age wage employees who don't any reported earnings subject to tax and social security contributions, those persons whose labor income is mainly in-kind, and unpaid family workers. Using this definition, the percentage of those with some labor income who work informally, ranges from 7.5 percent in 2008 to 10 percent in 2010, which is largely consistent with other estimates.

[30] Source: Latvian SILC 2011, authors' calculations.

[31] Based on some estimates, as many as 70 percent of self-employed are working informally (Koettl and Weber, 2012).

employment (Immervoll and Pearson, 2009). A few countries "make work pay" by successfully keeping employees' income tax and/or contribution burdens low (most Anglophone countries, Korea, or the Slovak Republic). But in-work benefits often go beyond that by reducing tax burdens below zero for some groups (i.e., the benefit or tax credit exceeds tax/contribution burdens)

A large group of OECD countries now operate **in-work benefit (IWB) programs** that make recurring payments to a defined group of low-income workers "permanently", i.e., for as long as other eligibility conditions are met (e.g., Belgium, Finland, France, Germany, Hungary, Ireland, Korea, the Netherlands, New Zealand, Sweden, the United Kingdom and the United States). Depending on how these payments are targeted, they can result in much-improved incentives for non-marginal employment for some groups, but they can also create problems for others. This is because, in order to contain costs, in-work benefits are also typically phased out at higher earnings ranges. If these phase-outs employ income tests that depend on family (rather than individual) incomes then they can damage work incentives for second earners in particular. To avoid the problems associated with benefit phase-out, costs can also be contained by making benefits time-limited. "Transitional" IWB that are paid only for a limited period following new employment in a qualifying job are, for instance, available in Australia, Belgium, Canada, Ireland, Japan, Korea and the Slovak Republic.

Countries have chosen different types of in-work support tailored to their existing system of taxes and transfers. Those administering in-work support through the tax system have typically recognized the need to make tax credits refundable in order to extend support to those with no or little tax liabilities. Others have chosen to provide in-work support through the family-benefit system. A third possibility is a targeted offset against social contributions (a "contribution credit").

4.1.2 Do in-work benefits function as intended?

IWB are attractive because they redistribute to low-income groups while also creating additional work incentives. But like all social benefits, they have to be financed, which creates additional economic costs for some. However, because low-income workers tend to be more responsive to financial incentives than middle or high-income earners, and because the savings from each additional job are large (out-of-work benefits are no longer payable) the additional tax burdens on higher-income earners can be much smaller than for other types of transfers or tax reductions. For instance, a study considering the introduction of a simple in-work benefit in 15 EU Member States suggests that the cost to taxpayers of redistributing one euro in the form of an IWB can be as low as one euro, implying an efficiency cost close to zero – a remarkable result in view of the sometimes large efficiency costs of other redistribution measures (Immervoll et al., 2007).

Yet, studies also indicate that the IWB-type policies are probably much less effective in some countries. Where wages of targeted groups are low, IWB can make a big difference to in-work incomes and work incentives. In turn, it is more difficult to achieve a meaningful degree of redistribution if income differences between these groups are already quite small to begin with: With smaller income differences between those receiving IWB and those financing them, many recipients are likely to also pay for the IWB through higher taxes, so that the net redistributive effect is then limited (the same mechanism also weakens the intended positive effects on work incentives). Likewise, a given income supplement for those in work can be expected to create limited employment gains if activity rates of the relevant groups are already high.

Studies looking at the employment impact of IWB have tended to find that they can be effective at raising employment rates among the target group, but that their effect on aggregate employment is small. Effective targeting of IWB support is therefore key for maximizing the return on government spending in this area—not only in terms of the direct redistribution that IWB achieve, but also in terms of their beneficial effect on employment.

In combination, these observations suggest a number of **"framework conditions"** that strengthen the case for targeted in-work support:

- IWB that provide recurring payments to low-income workers (e.g., in the form of family benefits or refundable tax credits) are a cost-effective redistribution instrument, especially

where in-work poverty is a problem. The redistributive role of IWB is more limited if they take the form of short-term or one-off transitional payments (e.g., for those taking up a new job).

- Where low earnings are subject to relatively high labor tax burdens, targeted reductions of taxes or social contributions are equivalent to IWB and can be a high priority for improving labor-market performance.
- IWB work well when there are significant earnings or income disparities. If distributions are very compressed (equal) then it is much more difficult (costly) to accentuate work incentives in a meaningful way, or to create a significant degree of redistribution (IWB are in these cases either very expensive or largely ineffective).
- Targeting IWB to low-income families can be useful where redistribution to these families is a primary objective. However, means-testing IWB on *family* income damages work incentives of other potential earners in the household, which can be counterproductive in countries where these incentives are already weak (e.g., because of joint income tax systems or expensive childcare) or where second-earner employment rates are low. Calculating IWB entitlements based on individual rather than family incomes can then be preferable.

4.1.3 In-work benefits in the context of non-reporting and underreporting

Ability to identify the target group is a crucial feature of policy design, which helps increase cost-effectiveness of in-work benefits. In the context of informality and under-reporting, these policies might not be effective at achieving their objectives. On the one hand, employment conditional benefits or tax credits could strengthen incentives to take up formal jobs or increase declared income by increasing pay offs to workers[32]. On the other hand, targeting of such benefits could be poor due to underreporting, as it could even create additional incentives to under-report incomes to maintain eligibility for such benefits, unless enforcement of formal work is increased at the same time.

If underreporting is prevalent, permanent in-work benefits, such as tax credits, for example, might not be appropriate and fiscally sustainable. Instead, time-limited "back to work" benefits can be introduced which target those who are long-term unemployed and social assistance beneficiaries. This would prevent those currently working from taking advantage of the benefits by increasing share of unreported income.

The extent of underreporting is very difficult to assess, however, due to a usual lack of instruments in the survey data to identify reported earnings. Latvia Survey of Income and Living Conditions (SILC) data links respondents with administrative databases using unique national IDs and has information on the amount of social security contributions paid by employers. This registry based data allows estimating a discrepancy between wages as reported by employers and wages reported by survey respondents. The difficulty stems from the fact that survey responses could also be biased due to under-reporting, recall issues, rounding up/down and other factors which could lead to differences between the two values (measurement error). Using maximum likelihood estimation it is possible to disentangle the measurement error from the actual probability to evade[33].

According to these estimates based on 2009-2010 Latvia SILC data, the average probability of evading tax among registered/formal employees[34] is about 31 percent, while the average share of undeclared income is about 10 percent. Those who report earning minimum wage or less are much more likely to under-report (66 percent versus 23 percent). They also, on average, under-report a

[32] This effect has been found for single fathers in a recent study of United States' Earned Income Tax Credit (EITC). Single fathers' informal-sector participation declines by 7.3 percentage points, conditional on working in the regular sector, if a state EITC increases by 10 percent of the federal credit. Regular-sector hours worked per week increase by 4.5 and informal-sector hours per week fall by 2.2 with no significant effect on total hours. (Gunter, 2012)

[33] For details on the methodology, please see Cahu and Strokova (forthcoming).

[34] Informal employees, i.e. those with earnings but no social security contributions are excluded from this sample. For them the share of evaded earnings is 100 percent. For more details, please see Cahu & Strokova (forthcoming).

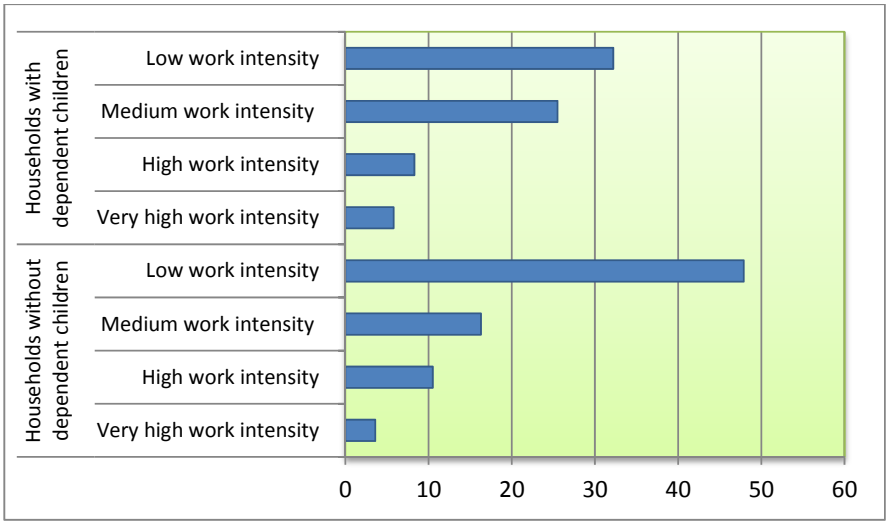
significantly higher share of their wages (33 percent versus 5 percent). Among those who are more likely to under-report (probability of evasion of 70 percent or more corresponding to about 15 percent of all employees), about two-thirds report earning the minimum wage. Among those who are very likely to under-report (probability of evasion is 90 percent or more), 75 percent report earning minimum wage only, however, overall, they only represent 11 percent of all employees. Nevertheless, those who report minimum wages generally undeclare smaller amounts in absolute terms than those who report higher wages. In summary, those reporting minimum wages are more likely to be evaders, but the amounts they evade are generally smaller than those who report wages higher than the statutory minimum wage.

Inability to target in-work poor given underreporting is particularly challenging, since the problem of in-work poverty exists in Latvia, especially for households with low work intensity.[35] The at-risk-of-poverty rate is almost 50 percent for low work intensity households without dependent children and more than 30 percent for household with children. Since these households have some labor market attachment, employment conditional benefits could be an appropriate policy to raise their incomes, but if it is not possible to distinguish those who have low wages due to under-reporting and those with truly low wages, the policy can be very expensive. Indeed, it has been shown that a high spike in the wage distribution at the minimum wage level is correlated with the extent of underreporting of earnings in the economy (Tonin, 2011), which is consistent also with our findings above.

Hence, minimum wage policies have to be also carefully considered. In practice, minimum wage is an important instrument that any in-work benefits are not "pocketed" by employers through lowering wages and off-setting any effects for intended beneficiaries. But it is generally considered a rather "blunt" instrument to both i) increase incomes of the low skilled and ii) increase tax compliance. The design of in-work benefits has to be calibrated with potential interactions with the minimum wage. Furthermore, given the incidence of under-reporting of wages in Latvia, policies aimed at increasing tax compliance would need to be pursued simultaneously with any policies targeting in-work poor.

Some instruments which could be used to incentivize employment and provide income support to low wage earners in Latvian context will be discussed in Section 5.4.

Figure 11: In-work at-risk-of-poverty rate by work intensity of the household (population aged 18 to 59 years)



Source: Eurostat.

[35] The indicator persons living in households with low work intensity is defined as the number of persons living in a household having a work intensity below a threshold set at 0.20.The work intensity of a household is the ratio of the total number of months that all working-age household members have worked during the income reference year and the total number of months the same household members theoretically could have worked in the same period.

5 Reform options and priorities

5.1 Announced policy changes

In this section we analyze recently implemented or announced reforms to the tax and benefits system. The impact of the following implemented or announced changes has been considered:

- ***Guaranteed Minimum Income program:*** Since January 1, 2013, monthly GMI amount will be LVL 35 for all persons regardless of age instead of LVL 40 for adults and LVL 45 for children. Municipalities will be allowed to set a higher level (up to 90 LVL) of GMI for children provided they have financing. Since January 1, 2013, the GMI program will (as prior to the crisis) be fully financed from local government budgets.

- ***Family state benefit:*** In accordance with the Government decision and based on the report "On evaluation of social security provisions to come into force in 2013-15" it is envisaged that the current reduced flat rate monthly amount of LVL 8 will continue to be paid in 2013 and 2014. As of January 1st 2015, it is planned to resume the differentiation of benefit amount depending on the number of children in the family and to grant the benefit in double amount for the second child and in a triple amount for the third and each subsequent child.

- ***Dependents tax allowances:*** It has been approved that the tax free allowance for all dependents (children or eligible spouses) will increase by 10 LVL to 80 LVL per month starting from July 2013.

- ***Income tax rate reduction:*** The income tax reduction schedule will be as follows[36]: from 25 percent to 24 percent in 2013, 22 percent in 2014, and 20 percent in 2015.

The government also proposes several reforms and adopted a policy change, which are not considered in the analysis below either because they are special cases, not implemented in the OECD tax-benefit model (maternity, paternity or parental benefits, child care benefit) or because they represent a continuation of the current policies (unemployment benefit). These reforms and their implications are discussed in Box 4.

Additionally, a labor tax reform is being condisered to in order to decrease tax wedge for low wage earners and strengthen incentives to enter into labour market. The proposal and its potential impact on work incentives will be discussed in Section 5.3.

5.1 Who are the "gainers" and "losers" of the announced reforms?

Here the same methodology as in Section 2.4 is used, but the analysis is extended to the announced reforms. **Figure 12** shows changes in net incomes by period, as before, with the addition of changes due to the proposed reforms, by household type, and shows a breakdown of the change between 2012 and proposed reforms by policy (income tax, social assistance benefits and family benefits[37].

Results show that the announced reforms, most of which have already been implemented, are regressive – both in relation to the situation in 2005 and comparing with 2012. The really low wage earners (those with annual earnings in the lowest 10 percent of the full-time wage distribution or, alternatively, those who earn less than the minimum wage) in all household types stand to lose as a result of the changes. The changes in income taxes are not sufficient to compensate low wage earners for cuts in social assistance. Moreover, since family benefits count as income in the income test for the GMI program, any increases in family benefits are absorbed by a corresponding cut in the

[36] As set in the Law on Personal Income Tax and adopted by the Parliament (Saeima). For the purposes of simulations, the final income tax rate is assumed (20 percent).

[37] For the purposed of these simulations, the average wage is assumed to grow at the same rate as is estimated for 2012.

GMI benefit for low income families. Overall, changes in the family benefits are likely to have an impact on those families with earnings around minimum wage, who are not eligible for social assistance. The impact of family benefits attenuates with the rise in earnings, as they play a marginal role for higher wage earners. On the other hand, the biggest gains from an income tax increase are accrued to those with earnings more than two thirds of median, and particularly, for high wage earners.

Box 4. Additional proposed, announced or adopted reforms

Maternity, Paternity, Parental benefits

Currently maternity leave lasts for 112 days but can be extended in case of complications or multiple births. During this period a maternity benefit is being paid at 80% of average social insurance contribution wage of the beneficiary. Paternity benefit is paid during 10 days to fathers at 80% of their income if they take out this leave during a 2 month period after the birth. Parental benefit is granted to the employed parents caring for a child under 1 year of age in the amount of 70% of the average monthly social contribution made, but no less than 100LVL (starting from 1th January 2013).

On a temporary basis (until December 2012) these benefits were capped. The parents receive a full sum of the above mentioned benefits, in case the daily amount is lower than or equal to 11.51 LVL. In case the amount exceeds LVL 11.51, they get only 50 percent of the part of benefit that exceeds 11.51 LVL a day. It is decided to increase the ceiling on the amounts starting from 01.01.2013., so that in 2013-14 parents or other persons who take care about child will receive full sums of benefits lower or equal to LVL 23.02 per day. The payment of additional 50 percent of the remaining sum will also be continued.

Unemployment benefit

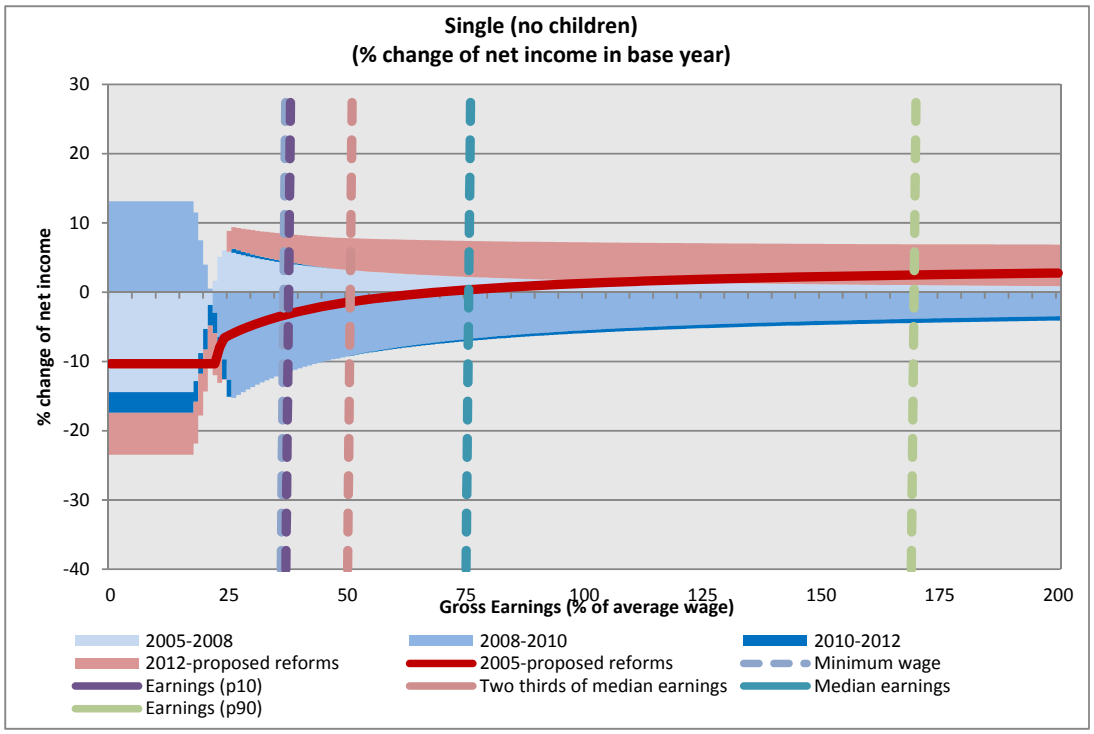
From January 1, 2013, the current unemployment benefit duration of nine months was permanently extended to all qualifying unemployed. The benefit amount depends on the length of unemployment period: beneficiaries receive the full amount for the first three months; 75 percent of the full benefit amount in the following three months, and 50 percent of the full benefit amount for the last three months.

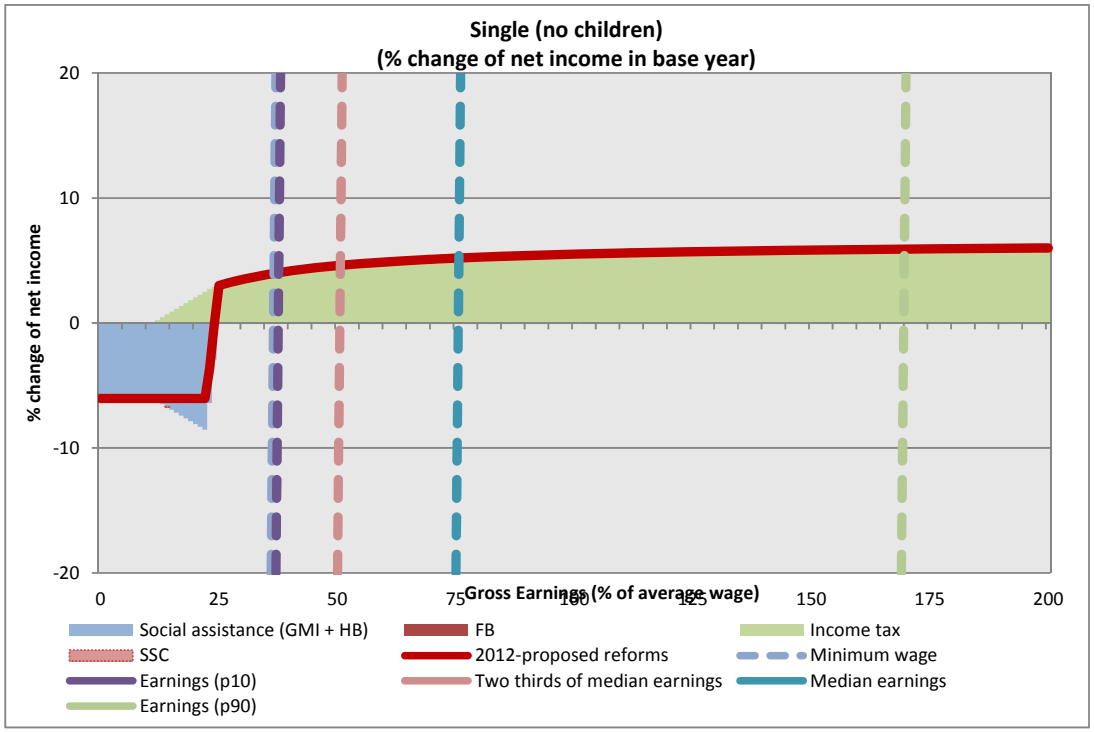
Child care services

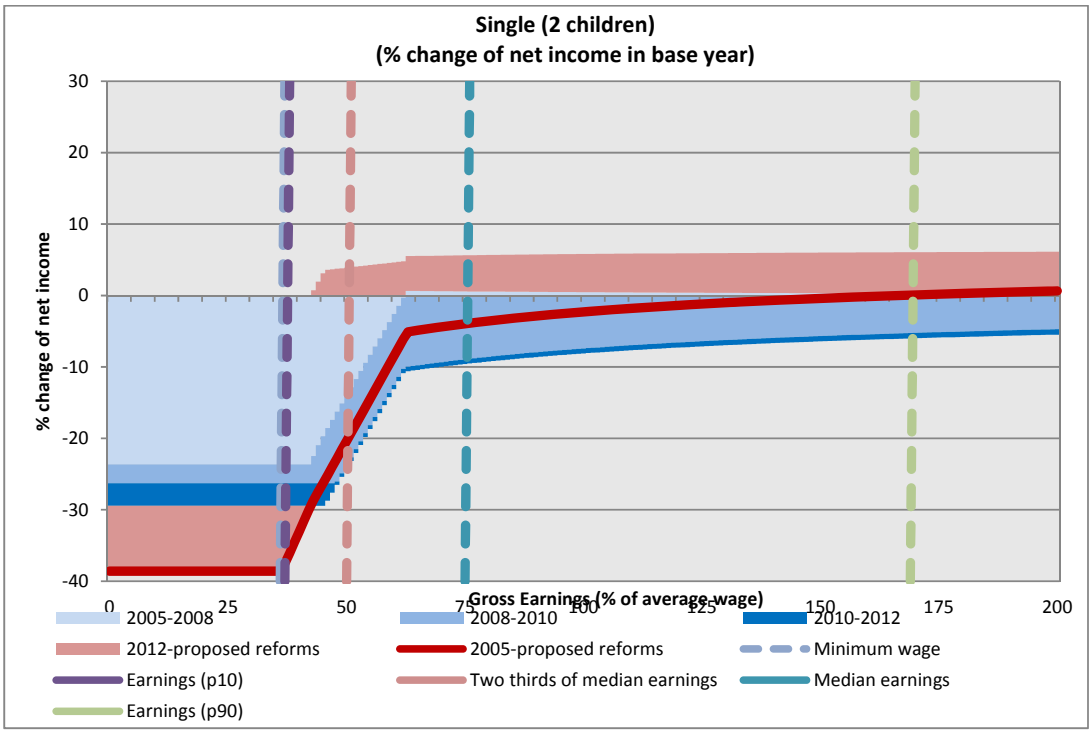
More favorable provisions for persons after child care are proposed to be introduced. Currently there is a proposal to introduce a 50 LVL voucher for a working, studying or involved in ALMPs family with a child from 1-2 years (from September 1, 2013). Starting from January 2013, the amount of Child care benefit for those unemployed parents, whose children are under 1 year old, was doubled (from LVL 50 to LVL 100 per month). Similarly, the benefit to parents raising children between the age of 1 and 1.5 (without regard of the parents' employment status) was increased from LVL 30 to LVL 100 per month.). The benefit for taking care of a child from the age of 1.5 years to 3 years will remain unchanged at the level of 30 LVL.

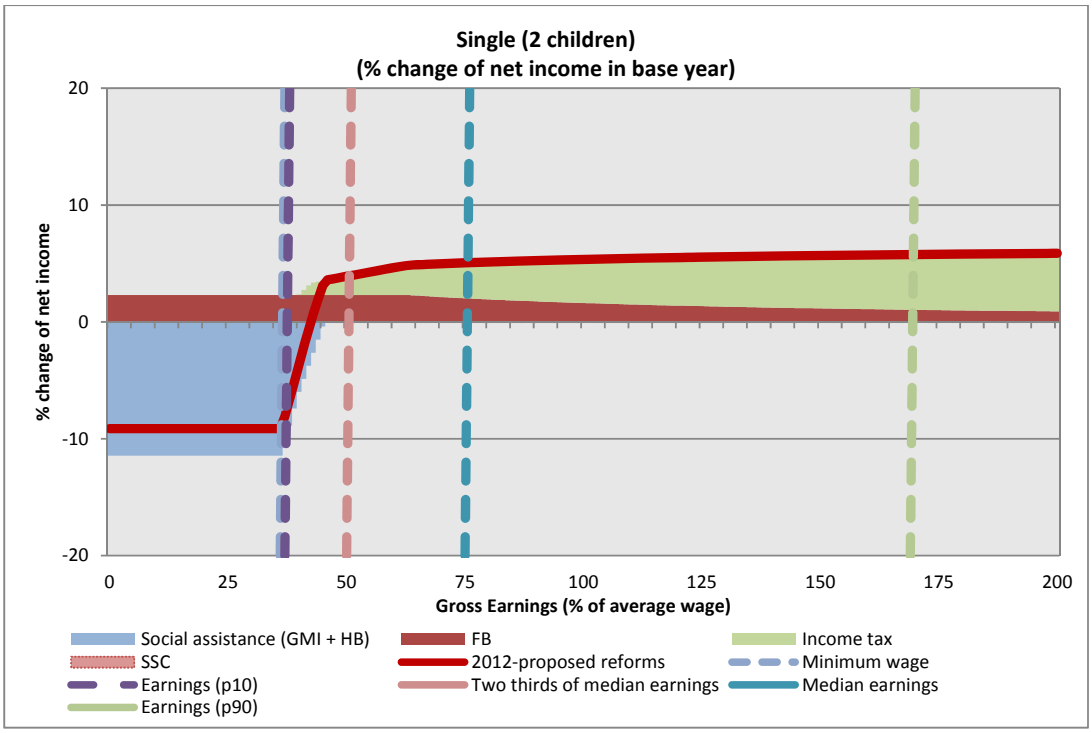
Source: Ministry of Welfare.

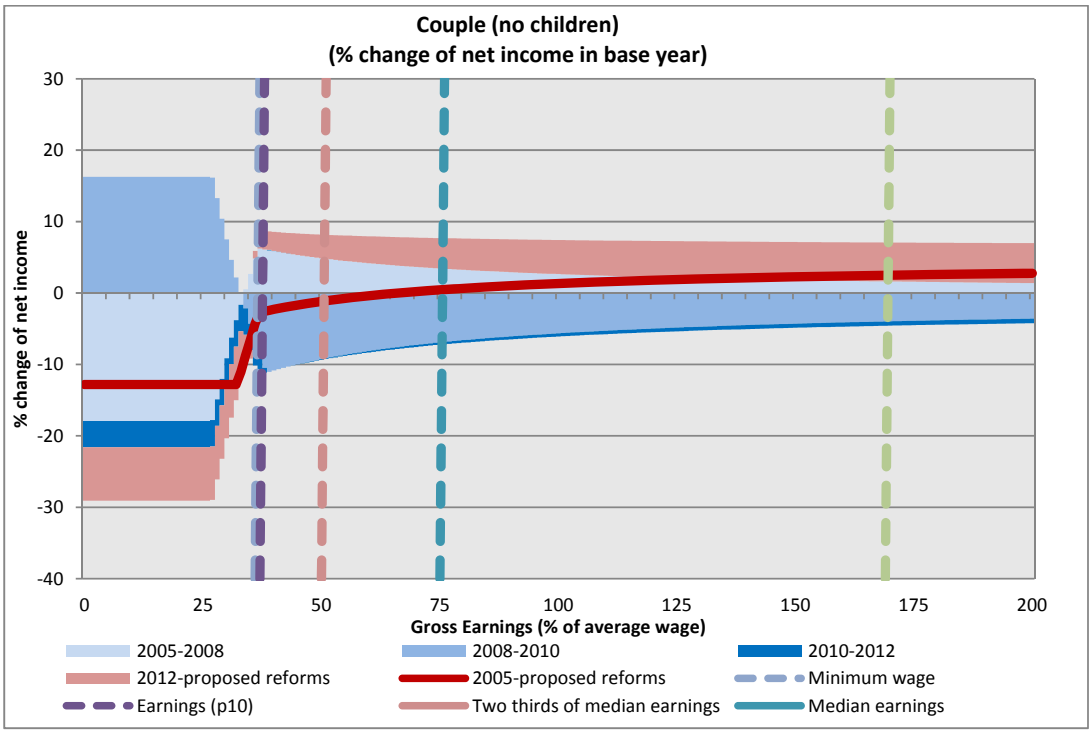
Figure 12: Changes in net incomes for different household types (2005-announced reforms) and decomposition of changes

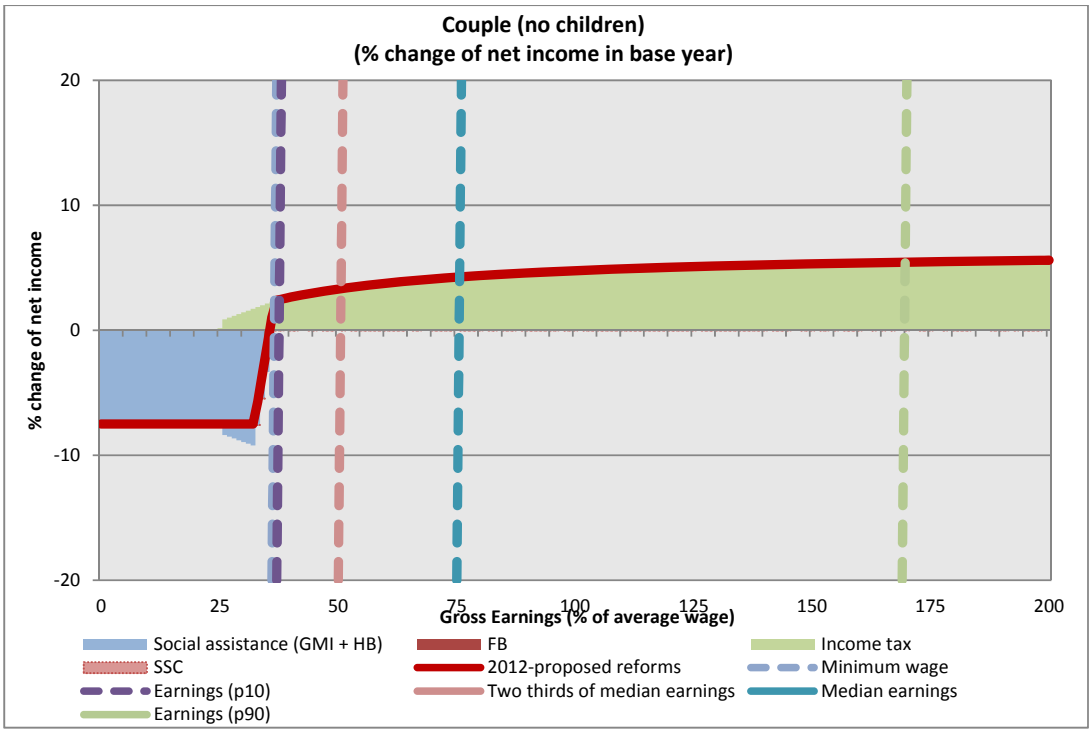


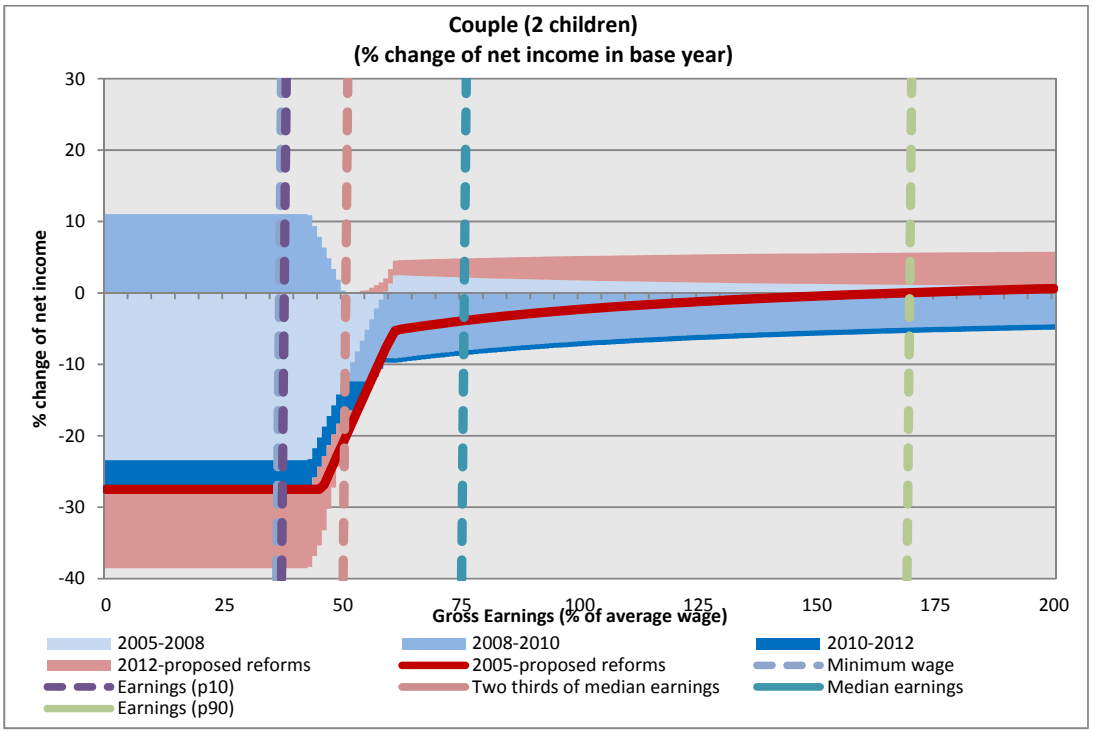


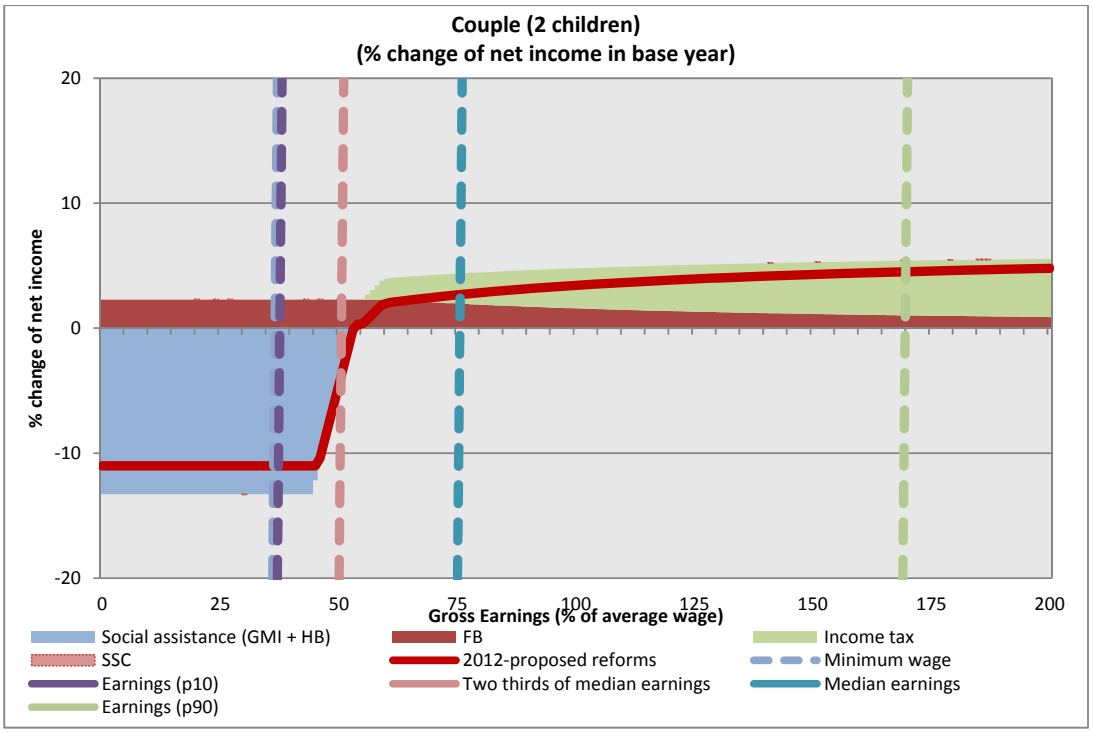

Single (2 children)
(% change of net income in base year)
% change of net income
30
20
10
0
-10
-20
-30
-40
0
25
50
75
100
125
150
175
200
Gross Earnings (% of average wage)
2005-2008
2008-2010
2010-2012
2012-proposed reforms
2005-proposed reforms
Minimum wage
Earnings (p10)
Two thirds of median earnings
Median earnings
Earnings (p90)


Single (2 children)
(% change of net income in base year)
% change of net income
20
10
0
-10
-20
0
25
50
75
100
125
150
175
200
Gross Earnings (% of average wage)
Social assistance (GMI + HB)
FB
Income tax
SSC
2012-proposed reforms
Minimum wage
Earnings (p10)
Two thirds of median earnings
Median earnings
Earnings (p90)


Couple (no children)
(% change of net income in base year)
% change of net income
30
20
10
0
-10
-20
-30
-40
0
25
50
75
100
125
150
175
200
Gross Earnings (% of average wage)
2005-2008
2008-2010
2010-2012
2012-proposed reforms
2005-proposed reforms
Minimum wage
Earnings (p10)
Two thirds of median earnings
Median earnings


Couple (no children)
(% change of net income in base year)
% change of net income
20
10
0
-10
-20
0
25
50
75
100
125
150
175
200
Gross Earnings (% of average wage)
Social assistance (GMI + HB)
FB
Income tax
SSC
2012-proposed reforms
Minimum wage
Earnings (p10)
Two thirds of median earnings
Median earnings
Earnings (p90)





5.2 Impact of announced reforms on financial incentives to work

The implemented and announced reforms are expected to marginally improve financial incentives to take up work. Table 1 shows average effective tax rates (participation tax rates) for different family situations before and after reforms. These indicators decrease in a number of cases, due to the fact that the decreased benefit entitlements increase the potential gap between out-of-work income and

in-work income. Additionally, increasing dependent allowances and decreasing tax rates lowers tax burden and increased take home pay.

It is, unlikely, however that these reforms will significantly improve financial incentives to work, while they do come at a significant cost to the most vulnerable. As is shown above, net incomes of households with low earnings are 6 to 10 percent lower than before the reforms. Given the initial low adequacy, this is a troublesome decrease. Section 5.4 proposes several alternative instruments which could be adopted to both improve income support and promote employment.

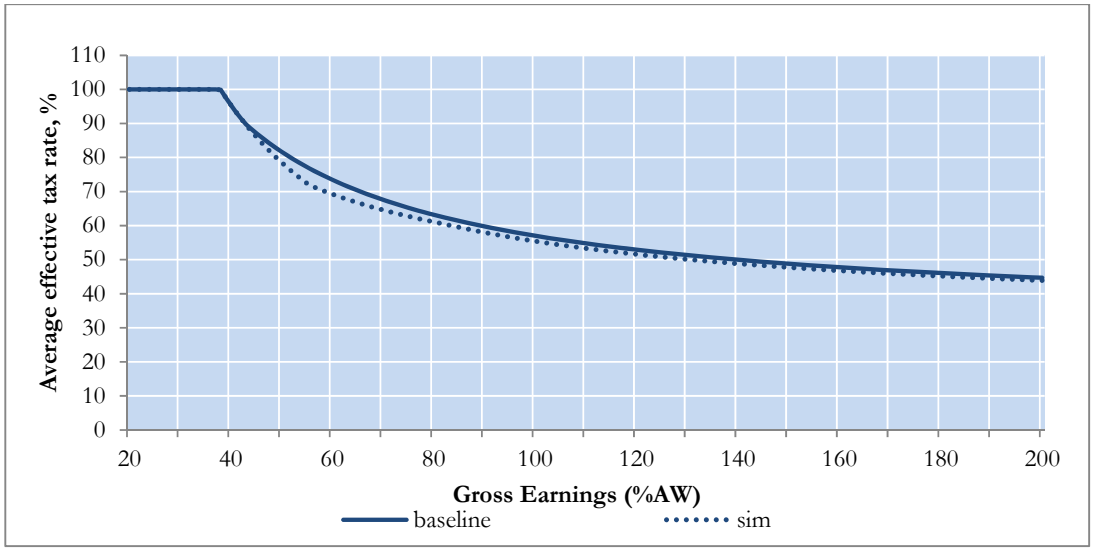
Additionally, the Ministry of Finance is considering a reform to income tax to increase net incomes for low wage earners and strengthen incentives to enter into labour market. In summary, the proposal will increase non-taxable amount for minimum wage earners, while leaving it the same or phased out for workers earning above the minimum wage. Simultaneously, the minimum wage would be increased, however, with the idea of increasing declarable incomes. For the time being the proposal is discussed in-house. If endorsed by the management, the proposal will be included in the annual budget preparation process. The proposal has its fiscal costs, and therefore it will be analyzed in the context of the fiscal policy objectives and constraints.

As was shown earlier, the concern about under-reporting of wages is not unfounded in Latvia. Those who report minimum wage or less are significantly more likely to evade parts of their earnings. While this reform may be effective at reducing under-reporting around the minimum wage, the total fiscal cost is not clear as for other types of workers (i.e. those earning above the minimum wage), the proposal results in negative impact on revenues. Furthermore, increasing minimum wage could have implications on hiring of those for whom it may be binding (such as the low-skilled or youth) and lead to decreased demand for labor due to increasing labor costs for employers [Annex 2[38]).

From the perspective of increasing work incentives, the proposed reform on non-taxable minimum won't have a large enough effect on incentives to move from social assistance to jobs. For example, for a single parent with 2 children receiving social assistance benefits (GMI and housing), average effective rate will decrease by a maximum of 3.8 percentage points if the parent in such a family take a job at 73 percent of average wage. Still, the average effective rate in this case after the reform is about 67 percent, which means that net income of the family will only increase by less than 33 percent (Figure 13). This does not increase pay-off from work significantly, particularly, compared to policies existing in other countries to increase work incentives among the low-wage earners, as well as increase adequacy of incomes of the working poor (Figure 14).

[38] Annex 2 is a reproduction of the note titled "Some simulations of the effects on the proposed changes in minimum wage and personal allowance in Latvia" produced by M. Hazans.

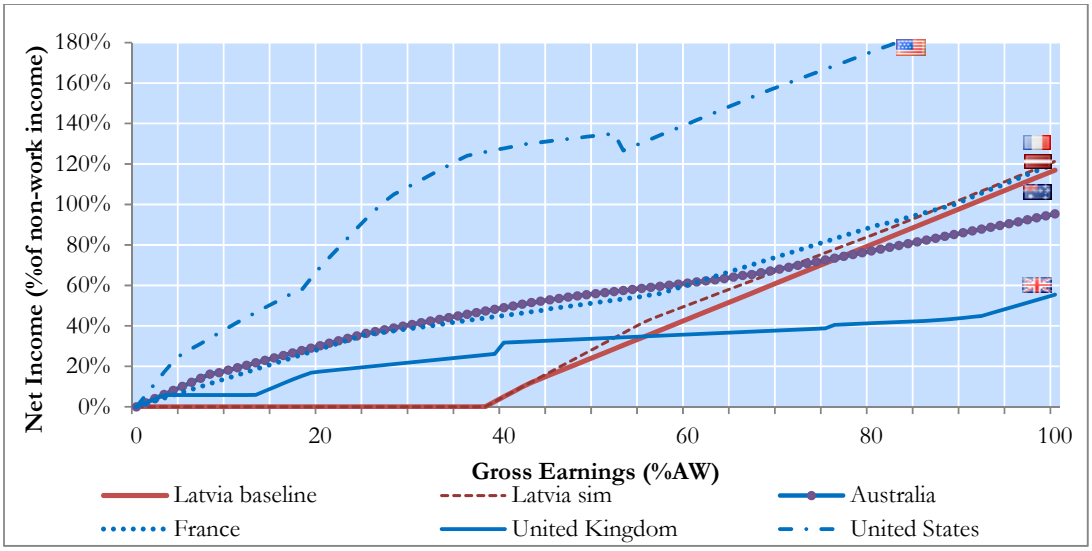
Figure 13: Average effective tax rate for a single parent with 2 children in 2013 (baseline and reform scenario)



Note: The baseline scenario corresponds to 2013. Simulated scenario corresponds to the MoF's proposal to increase non-taxable minimums as of February 21, 2013.

Source: Staff calculations based on OECD tax-benefit model.

Figure 14: Increase in net income as work effort increases for one earner couple with 2 children, selected countries



Note: In-Work Benefits: United Kingdom (Working Tax Credit), United States (Earned Income Tax Credit); Tapered withdrawal of Social Assistance in France, Australia; Increase of minimum wage and non-taxable minimum in Latvia (MoF's proposal as of February 21, 2013)

Source: Staff calculations based on OECD tax-benefit model.

Box 5: Labor tax reform proposals

In order to decrease tax wedge for low wage earners and strengthen incentives to enter into labour market, following proposal is being discussed in the Government of Latvia.

Non-taxable minimum (45 LVL per month) might be increased to 84 LVL per month for minimum wage earners. For employees earning above the minimum wage, non-taxable minimum will be decreased proportionally as a fixed share of difference between gross earnings and the minimum wage. The proposed formula is: 84LVL – 0.18*(wage – 225 LVL). Allowance for dependents will be increased from 80 LVL to 98 LVL per month and will be flat for all earnings ranges.

Further two sub-options are discussed – if non-taxable minimum should go down to zero or remain at the minimum level of current 45 LVL.

Minimum wage might be increased form current 200 LVL to 225 LVL or 320 EUR per month.
Increasing minimum wage is aimed to address the issue of underreporting of income or so called "envelope wage" where a person is employed officially on a minimum wage or thereabouts and receives an unofficial supplement, which is not taxed.

Increasing non-taxable minimum is aimed at decreasing the tax wedge particularly for low wage earners, making labour tax system more progressive and creating incentives for work and decreasing benefit dependency.

The reform is intended simultaneously. The final numbers will be discussed in line with annual budget process of 2014, expected in August 2013.

Source: Ministry of Finance (version of the proposal as of February 21, 2013).

5.3 Alternative reform options to improve income support and promote employment

As was shown earlier in this note, households relying on social assistance benefits have seen large net income losses since 2005 relative to the average and high wage earners. To revert this situation and to align benefit adequacy of the GMI program to EU and OECD levels, the GMI benefits would need to be increased substantially, especially after the cuts that took place in January 2013. Even under a very generous scenario, bring the GMI benefit levels to more adequate levels comes at a relatively small fiscal cost.

Specifically, in EU/OECD countries minimum income programs typically guarantee about 30 percent of the national median equivalized income for single persons, which in Latvia would represent **about 75 LVL per month** for a household head. In order to achieve comparable degree of income support for other household types, the benefit structure would need to be adjusted to have some sort of equivalence scale to ensure that within-household economies of scale are accounted for. Such equivalence scales are used in many EU and OECD countries. For illustration, we apply the modified OECD scale: 1.0 for the first adult; 0.5 to the second and each subsequent adult and over; and 0.3 to each child. This is the equivalent scale that is being used in the EU in calculating the equalized household income. Hence, if the GMI benefit is 75LVL for the first adult in the family, then it will be 37.5 LVL for other adults in the family and 22.5 LVL for children.[39]

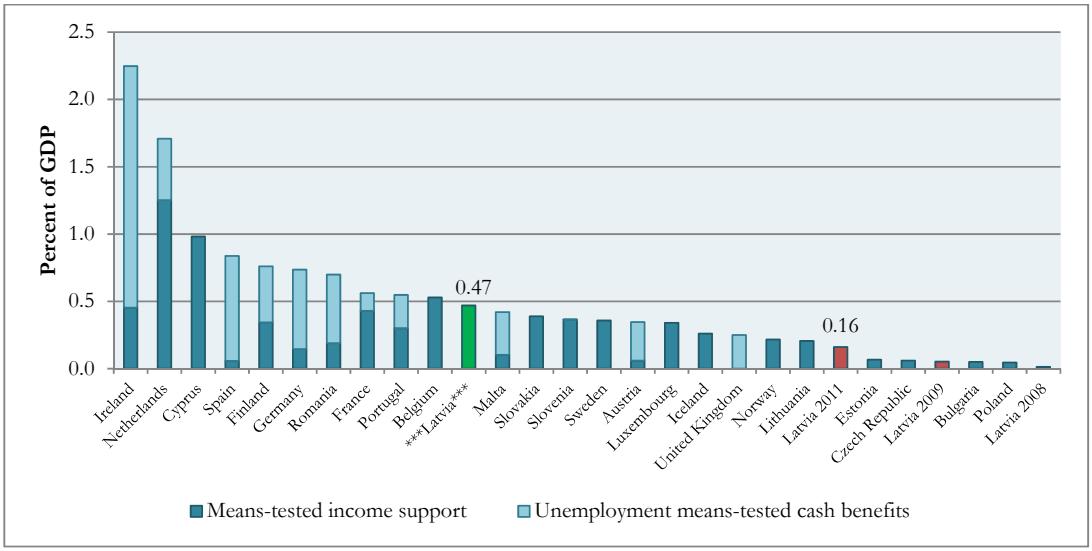
Assuming that those who receive old-age or disability pensions receive the current maximum GMI amount of 90 LVL and full take up (i.e. everyone who is eligible receives the benefit), the coverage of the GMI program would be 10 percent of the population (compared to just 3 percent in 2010).[40] While

[39] In our simulations, unlike the modified OECD scale we assume that a child is a person under age of 18 (14 in the modified OECD scale), which is consistent with the national definition of a child.

[40] Note that coverage estimated on the basis of household survey data may differ from administrative data. Estimates are based on 2011 Latvia SILC.

currently only about 12 percent of those at risk of poverty[41] receive the GMI program, under this scenario almost 45 percent would. Importantly, the total cost of the program would be under 0.5 percent of GDP – which is about how much many EU countries spend on minimum income programs and/or unemployment means-tested cash benefits (which are in most cases act as substitutes). Again, assuming that everyone who qualifies receives the benefit[42] and income disregards in use before 2012[43], the total cost of the program would be only 0.47 percent of the GDP – comparable to what Slovakia and Slovenia spend on their programs and significantly less than how much Romania spends on means-tested benefits for the poor and unemployed (Figure 15). In comparison, in 2011 the program spending was about 0.16 percent of GDP, but if everyone who was income-eligible received the benefit, the actual spending would be 0.28 percent of GDP.

Figure 15: Spending on means-tested income support and unemployment assistance as a share of GDP, 2009



Note: *** Simulated cost of a GMI program with the following monthly benefit amounts/thresholds (75LVL for first adult except old-age and disability pensioners (90 LVL), 37.5 LVL for other adults, 22.5 LVL for kids).

Source: ESSPROS data, Administrative data from MoW, World Bank staff calculations based on Latvia SILC 2011.

To improve work incentives and boost further incomes of the working poor, an earned income disregard can be introduced into the program. As noted earlier, many EU and OECD countries have earned income disregards imbedded into the program design to increase labor market attachment of beneficiaries. Some countries, like Slovakia, disregard a certain percentage (25 percent) of earned income for the purposes of calculating benefit eligibility/amount. Some countries disregard up to a certain amount of earned income monthly or annually (see Table A3). With such an income disregard,

[41] Defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers.

[42] Currently, this does not appear to be the case. Almost a quarter of those at risk of poverty poor don't receive the GMI even though they should according to the income criteria (assuming 90 LVL for all pensioners). This, however, does not take into account any asset criteria that may make some households ineligible according to the rules of the program. Nevertheless, the share of those at risk of poverty who don't receive the GMI indicates that there is a large coverage gap.

[43] Since January 2012, the list of income disregards has been cut down further and includes primarily benefits for the disables or one-off benefits: Disabled child care benefit, Benefit for a disabled person, who needs special care, Benefit for remuneration of assistant, Additional payment to family state benefit for a disabled child; Benefit for remuneration of transport fee for disabled persons with difficult mobility; State support program - celiac disease; Child birth allowances and Death allowances. All other social insurance and assistance benefits count as income, including the Family State Benefit and other family and child benefits, as well as unemployment fellowship training.

the coverage of the GMI program could increase significantly at a very low additional cost. Assuming 25 percent earned income disregard, the coverage of the program (assuming benefit amounts outlined above) would increase to 24.85 percent of the population, with coverage of those at risk of poverty to 63 percent. Despite such an increase in coverage, the total cost of the program increases to just about 0.6 percent of GDP.

Alternatively, the Government of Latvia may want to consider in-work benefits (such as an earned income tax-credit in the United States) to increase incentives to work and supplement incomes of the working poor. However, introducing separate programs and systems can be administratively costly. The United Kingdom is currently implementing a major reform to the tax and benefit system to consolidate a set of means-tested benefits and tax credits into one program administered through the tax system—the Universal Tax Credit (UTC). One of the advantages of such a system is that, once implemented, it can significantly reduce administrative costs, but also simplify the rules and procedures needed to apply for various benefits, reducing the burden on beneficiaries as well (See Box 6 for details on the program). Both approaches require accompanying measures to be taken to simultaneously improve tax compliance.

Box 5: UK Universal Credit Scheme

The Universal Credit will replace the system of means-tested benefits and tax credits for working-age adults, including income support, income-related jobseeker's allowance and employment and support allowance, working and child tax credits and housing benefits. It is to be the main means-tested benefit, and there will remain other non-means-tested and contributory benefits. The Universal Credit will replace other means-tested benefits and will be gradually tapered away as in-work income rises. It will replace some existing benefits such as Income Support that have a 100% withdrawal rate when somebody returns to work. The Universal Credit is to be implemented nationally in October 2013.

The Universal Credit is calculated for the household and includes benefit amounts for single adults, couples, children, including disability, caring and housing costs. There are different rates for single people and couples, for children and those aged under 25.

Taper and disregards

The Universal Credit will have a taper rate of 65% for earned income (net of income tax and National Insurance contributions (NICs)), and a taper rate of 100% will apply to unearned income, with special rules for imputing investment income. A 100% taper will apply to unearned income—which is not subject to a disregard—and instead reduces the Universal Credit benefit pound-for-pound. This means that if a non-taxpayer earns an additional pound, they will lose 65p of Universal Credit, whereas if a basic-rate taxpayer earns an additional pound, they will have to pay an additional 20p in income tax and 12p in additional NICs and will then lose 44.2p in Universal Credit (65% of the 68p of additional net earnings).

Benefit cap

The benefit cap for working-age households (excluding those claiming Disability Living Allowance or Working Tax Credit) is set at £350 per week for childless single adults without dependent children and £500 per week for other households. The benefit cap is expected to impact a very small number of households: it is expected to affect about 67,000 households reducing their benefit entitlement by an average of £83 per week and cutting the benefits bill by about £290 million in that year. Compare this to the £18 billion per year of other planned cuts to welfare spending.

Families with more than £16,000 of financial capital are not entitled to any Universal Credit at all.

Source: Morgan (2013).

Table 1: Average Effective Tax Rates (AETR) for transitions from full-time unemployment (entitled to social assistance) to full-time employment, %

		After reforms	Before reforms	After reforms	Before reforms	After reforms	Before reforms
		33% of average wage		50% of average wage		67% of average wage	
single	entitled to UI benefit	83.8	86.7	85.5	88.9	86.3	90.0
	no UI benefit	77.0	83.6	60.6	66.5	52.6	58.0
single parent 2 children	entitled to UI benefit	100.0	100.0	78.2	93.8	77.5	80.0
	no UI benefit	100.0	100.0	78.2	93.8	65.7	78.4
one earner married couple, no children 1st spouse = inactive, 2nd spouse…	entitled to UI benefit	98.3	100.0	79.5	82.2	81.9	85.0
	no UI benefit	98.3	100.0	74.7	82.1	63.0	69.7
one earner married couple, 2 children 1st spouse = inactive, 2nd spouse…	entitled to UI benefit	100.0	100.0	89.7	100.0	73.1	85.8
	no UI benefit	100.0	100.0	89.7	100.0	71.8	85.8
married couple, no children 1st spouse = 67% AW, 2nd spouse…	entitled to UI benefit	83.8	86.7	85.5	88.9	86.3	90.0
	no UI benefit	32.7	36.9	31.4	35.6	30.7	35.0
married couple, 2 children 1st spouse = 67% AW, 2nd spouse…	entitled to UI benefit	83.8	86.7	85.5	88.9	86.3	90.0
	no UI benefit	32.7	36.9	31.4	35.6	30.7	35.0

Sources: Authors' calculations using OECD tax-benefit models.

6 Conclusions and recommendations

Latvia's economy has largely recovered from the worst of the global economic crisis, which hit the country particularly hard. Despite overall macro-economic improvement, unemployment rate in Latvia remains high and GDP growth did not translate yet into real improvements for the poorest part of the population. In the post-recession period, carefully balanced tax and transfer provisions are crucial as the budgetary and welfare costs of ineffective policy design are very large during and after a severe downturn. This policy note considered two crucial outcomes of tax and transfer policies in Latvia; *(i)* their capacity to alleviate poverty, reduce inequality and cushion income losses, and *(ii)* their implications for work incentives and their effectiveness at "making work pay". The main findings and recommendations are the following.

Unemployment benefits continue to play a limited role in Latvia as a source of income protection during a severe downturn. Despite discretionary policy changes during the crisis, coverage of unemployment benefits remains one of the lowest in Latvia among EU and OECD countries. This is in part driven by strict eligibility criteria and somewhat due to informality which leaves a certain share of employees without protection in case of unemployment. As a result, the combination of relatively short duration of unemployment benefits, even after the extension to 9 months,[44] relatively low unemployment benefit coverage, and the lack of follow-up unemployment assistance, make it unlikely that current levels of unemployment compensation present a major work incentive issue. However, limited coverage puts pressure on other social benefits, such as the GMI program.

Coverage of the GMI program is also very low and benefits are not adequate enough to keep beneficiaries out of poverty. Only about 12 percent of those in the poorest quintile[45] receive the GMI benefit in Latvia. While coverage expanded during the crisis after several policy adjustments have been made, the coverage remains one of the lowest among comparable programs in Europe. Furthermore, benefit levels are not sufficient to provide effective protection against destitution, as most beneficiaries remain a risk of poverty.

Since 2005, the combined effect of pre-crisis, crisis and post-crisis policies was a significant reduction in net benefits for all family types and at all earnings levels. Analysis of the situation of different households since 2005, which captures *only* the effects of taxes and transfers, shows that low-earning families with children saw the greatest reduction in net benefits. For childless families, losses were both less sizable and more equally distributed across the earnings range. Families who also suffered drops in their earned income will have experienced far greater income losses, but the analysis shows that taxes and transfers would have exacerbated any such loses.

Recent reforms, in particular, such as the cuts to the GMI program, have a disproportionate impact on the low-income. The recently announced reforms, most of which have already been implemented, are regressive – both in relation to the situation in 2005 and comparing with 2012. The really low wage earners (those with annual earnings in the lowest 10 percent of the full-time wage distribution or, alternatively, those who earn less than the minimum wage) in all household types stand to lose as a result of the changes. The changes in income taxes are not sufficient to compensate low wage earners for cuts in social assistance.

Adequacy of minimum income support can be improved significantly in Latvia at a relatively low cost. To revert some of the recent losses and to align benefit adequacy of the GMI program to EU and OECD levels, the GMI benefits would need to be increased substantially, especially after the cuts that took place in January 2013. Even under a very generous scenario, bring the GMI benefit levels to more adequate levels comes at a relatively small cost. For example, increasing the basic

[44] Made permanent from January 1, 2013, for all unemployment benefit recipients.

[45] Staff calculations based on Latvia 2010 HBS. Households are ranked on the basis of per capita consumption pre all social assistance transfers.

benefit to 75 LVL per month for the household head and introducing an equivalence scale into the formula would result in a much more adequate coverage of the program[46] (10 percent of the population compared to just 3 percent in 2010[47]). The coverage of those at risk of poverty[48] would increase from just about 12 percent to almost 45 percent. Importantly, the total cost of the program would be under 0.5 percent of GDP – which is about how much many EU countries spend on minimum income programs and/or unemployment means-tested cash benefits (which are in most cases act as substitutes).

Concerns about benefit generosity having economy-wide unemployment impacts are often exaggerated, particularly after a deep recession. In theory, more generous benefits do lengthen out-of-work spells for benefit recipients. Effect sizes are often small, however, and need to be weighed against the objectives of providing adequate income security for job losers. Importantly, there are a number of reasons why lower job-finding rates among benefit recipients should not be expected to translate directly into changes in *economy-wide unemployment* of a similar magnitude—especially in countries where out-of-work support is currently limited and benefit durations are short. Moreover, aggregate unemployment is less sensitive to changes in benefit generosity when labor markets are weak. However, certain design of benefits can play a significant role in either promoting or discouraging labor market participation.

Means-tested benefit recipients do face high marginal effective tax rates (METR) and formal might not always pay off in Latvia. In Latvia, the GMI benefit and the housing benefit are designed with a 100 percent marginal effective tax rate on earnings, i.e. the benefits decrease by 1 lat for each additional lat earned. As a result, on earnings ranges where households are eligible for either or both of these benefits, earners face an METR of 100 percent. Such a design could contribute to the so called low-wage traps, when it does not pay off for low-wage earners to increase working hours or move to marginally higher paid employment if all additional earnings are "taxed away". [49] Participation tax rates, which measure the part of additional gross wage that is taxed away when somebody on income-tested social assistance takes up a formal job, are particularly high in Latvia for low wage earners. For all considered household types, with the exception of singles, average effective tax rate (AETR) for taking up a low paying job (at 33 percent of the average wage) is 100 percent.

Recent reforms are unlikely to significantly improve financial incentives to work, while they do come at a significant cost to the most vulnerable. As was shown in the note, net incomes of households with low earnings are 6 to 10 percent lower than before the reforms. Given the initial low adequacy, this is a troublesome decrease. Hence, marginal improvements in financial work incentive indicators come at a significant cost to beneficiaries. Additionally, the proposed reform on non-taxable minimum won't have a large enough effect on incentives to move from social assistance to jobs, particularly, compared to policies existing in other countries to increase work incentives among the low-wage earners, as well as increase adequacy of incomes of the working poor.

Design of social assistance benefits could be improved to increase incentives take up low paid jobs. While the share of population for whom there could be significant financial disincentives to taking up formal jobs (as well as any jobs) is relatively small due to small benefit coverage, nevertheless, to mitigate financial work disincentives as well as provide additional income support for low wage earners, most developed countries implemented certain policies to "make work pay. "These include in-work benefits such as tax-credits, as well as redesigned their social assistance benefits to encourage beneficiaries to take low-paid jobs and connect them with the labor market. Given some

[46] Assuming full take up.

[47] Note that coverage estimated on the basis of household survey data may differ from administrative data. Estimates are based on 2011 Latvia SILC.

[48] Defined as individuals living in households with an equivalized disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 percent of the national median equivalized disposable income after social transfers.

[49] See Table A5 for METRs for average of marginal effective tax rate at different wage levels.

informality and under-reporting, implementation of such benefits needs to be accompanied by measures aimed at increasing tax compliance.

Implementation of "make-work-pay" policies in Latvia needs to be packaged with measures aimed at decreasing under-reporting. "Make-work-pay" that seek to ensure incentive compatibility of social protection measures can take different forms and practically all OECD countries operate such policies of one form or another. As was shown in this note, the concern about under-reporting of wages is not unfounded in Latvia. Those who report minimum wage or less are significantly more likely to evade parts of their earnings. If underreporting is prevalent, permanent in-work benefits, such as tax credits, for example, might not be appropriate and fiscally sustainable. Instead, time-limited "back to work" benefits can be introduced which target those who are long-term unemployed and social assistance beneficiaries. Alternatively (or additionally), these policies can be packaged with reforms to the revenue administration and other measures aimed at decreasing under-reporting and informality.

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Annex 1

Table A1.1: Unemployment insurance benefits, 2010

	Employment (E) and contribution (C) conditions	Insurance is voluntary(V) or compulsory(C) for employees	Waiting period (days)	Maximum duration (months)	Payment rate (% of earnings base)		Earnings base(2)	Minimum benefit (1)		Maximum benefit (1)		Permitted employment and disregards	Additions for dependent family members
					initial	at end of legal entitlement period		National currency	% of AW	National currency	% of AW		
	[1]	[2]	[3]	[4]	[5]		[6]	[7]	[8]	[9]	[10]	[11]	[12]
Australia	--	--	--	--	--		--	--	--	--	--	--	--
Austria	E+C: 1 year in 2.	C (if earnings above threshold)	0	9	55		Net	--	--	16,316	42	No reduction for earnings up to EUR 4396, total loss if earnings greater.	Each dependant: EUR 354.
Belgium	E+C: 468 days in 27 months.	C	0	nlimited	60	53.8 (after 1 year)	Gross	10,159	24	15,887	38	Maximum: limit of EUR 3872 for artistic employment.	If dependants, minimum benefit is increased to EUR 12090 (29% of AW.
Bulgaria	E+C: 9 months in last 15.	C	--	12	60		Gross	1,564	21	--	--	No benefits if employed	--
Canada(3)	E+C: 595 hours in 1 year.	C	14	11	55		Gross	--	--	23,764	53	Up to 40% of benefits or CAD 3900, whichever is higher.	Family supplements depend on income plus age and number of children.
Czech Republic	E+C:12 months in 3 years.	C	--	5	65	50-45 (after 2 and 4 months)	Net	--	--	Approx. 167000	58 (4)	Half of the minimum wage in a month is allowed without losing entitlement to unemployment benefits.	--
Denmark	E: 52 weeks in 3 years. C: membership fee.	V	0	24	90		Gross less 8% SSC.	160,416	43	195,516	52	Benefits are reduced in proportion to hours worked.	--
Estonia	E+C: 12 months in 3 years.	C	7	12	50	40 (after 101 days)	Gross	26,100	17	Approx. 220000	149	None.	--
Finland	E: 34 weeks in 28 months, C: 10 months.	V	7	23	Basic benefit (17% of AW) plus 45% of earnings exceeding basic benefit to 81% of AW then 20%.		Gross (excluding additional holiday pay) less SSC.	--	--	None		Working hours <75% of full time. Benefit reduced by 50% of gross income. Benefit plus income cannot exceed 90% of reference earnings.	Supplements: EUR 1254, 1840, 2371 for 1, 2 and 3 or more children respectively.
France	C: 4 months in 28 months.	C	7	24	57-75		Gross	9,829	28	79,488	228	Income <70% of reference earnings, hours worked/month <110 and duration <15 months. Benefit reduced depending on income ratio to reference earnings.	--
Germany	E: 12 months, C: 12 months in 2 years.	C	0	12	60		Net	--	--	38,880	92	Total loss if working more than 15 hours/week.	Rate increases by 7 percentage points if dependant children present.
Greece	E+C: 125 days in 14 months or 200 days in 2 years.	C	6	12	Flat rate benefit (27% of AW).		--	--	--	--	--	None.	Benefit increased by 10% for each.
Hungary	E+C: 365 days in 4 years.	C	0	9	60	60% of mandatory minimum wage	Gross average earnings of last 4 calendar quarters	529,200	21	1,058,400	42	For short term (<90 days) and occasional/seasonal employment, the benefit is suspended.	--
Iceland	E+C: 3 months in the last 12.	C	0	36	Paid at a fixed rate (34% of AW) for 10 days, then 70% of previous earnings for 65 days, then back to the fixed rate.		Gross. Fixed rate is proportional to hours worked in previous 12 months.	448,500	9	2,911,632	55	For occasional employment <2 days, benefit is reduced proportionally.	ISK 71760 per child (4% of fixed rate benefit).
Ireland(5)	C: 39 weeks in 1 year (or 26 "reckonable" contributions in 2 years). 104 weeks contributions paid since starting work	C	3	12	Fixed amount (32% of AW).		--	--	--	--	--	Benefit is not paid for any day or partial day of employment. Earnings are not assessed.	Supplements of 5% of AW per qualifying child, and 21% of APW per qualifying adult.
Israel	E+C: 12 months in 18 months.	C	5	6	32-80		Average gross earnings of last 3 months.	--	--	96,180	85	Where employment income is lower than the earnings base for the payment, the benefit level is the difference between actual wage and 75% of previous wage. The claimant must have worked for at least 25 days.	--
Italy(6)	C: 52 weeks in 2 years.	C	7	8	60	50 after 6 months	Average gross earnings of last 3 months.	--	--	12,879	46	No benefits if receiving earnings from employment (except for CIG scheme).	--

	Employment (E) and contribution (C) conditions	Insurance is voluntary(V) or compulsory(C) for employees	Waiting period (days)	Maximum duration (months)	Payment rate (% of earnings base)		Earnings base(2)	Minimum benefit (1)		Maximum benefit (1)		Permitted employment and disregards	Additions for dependent family members
					initial	at end of legal entitlement period		National currency	% of AW	National currency	% of AW		
	[1]	[2]	[3]	[4]	[5]		[6]	[7]	[8]	[9]	[10]	[11]	[12]
Japan	E+C: 6 months in 1 year (at least 11 days each month).	C	7	9	50-80		Gross earnings of last 6 months (excl. bonuses).	--	--	2,516,400	53	No benefits if employed.	--
Korea	E+C: 6 months in 18.	C	7	7	50		Gross earnings paid of last 3 months.	10,801,080	29	14,400,000	39	If income divided by number of benefit days entitled is over 120% of minimum wage then excess deducted from UI benefit. Benefit stops if employed more than 60 hours per month.	--
Latvia	C: 9 months in 12 months	C	0	9	65		Gross	--	--	--	--	No benefits if employed	--
Lithuania	C: 18 months in 36 months	C	--	9	40% + fixed amount of LTL 350 per month	20 after 3 months	Gross	4,200	18	7,800	33	No benefits if employed	--
Luxembourg	E+C: 26 weeks in 1 year.	C	0	12	80		Average gross earnings of last 3 months.	--	--	39,584	80	Reduced if earnings exceed 10% of the earnings base used to calculate benefit.	Replacement rate increases by 5 percentage points if dependent children present.
Malta	C: 50 weeks, including 20 in last 52.	C	--	5	Fixed amount (21% of AW).		--	--	--	--	--	Earnings must be below payment level.	Additional 11% of AW if lone parent or maintaining a spouse.
Netherlands	E+C: 26 weeks in 36, plus 52 days in 4 of 5 years.	C	0	38	75	70 (after 2 months)	Gross	12,846	28	36,131	80	If <5 hours/week, benefit reduced by 70% of gross earnings. If >5 hours/week, proportional reduction.	Supplementary benefits for low-income households to bring income up to a minimum guaranteed level.
New Zealand	--	--	--	--	--		--	--	--	--	--	--	--
Norway	E+C: Earnings above a minimum level.(7)	C	--	24	62		Gross	70,800	15	283,200	60	--	NOK 4420 per child.
Poland	E+C: 365 days in 18 months and earnings > minimum wage.	C	7	12	Fixed amount 30% of AW.(8)	Fixed amount 23% of AW (after 3 months).(9)	--	--	--	--	--	Gross income disregard of up to PLN 7902 (half the minimum pay).	--
Portugal	E+C: 450 days in 24 months.	C	0	24	65		Gross	5,031	29	15,092	87	If earnings less than maximum UI benefit, and hours less than 75% of previous working hours, final UI benefit = (maximum UI benefit*1.35 - income)	--
Romania	C: 12 months in 24	C	--	12	Fixed amount of 24% of AW plus 10% of earnings.		Gross	--	--	--	--	Can keep 30% of benefit if re-employed	--
Slovak Republic	E+C: 3 years in 4 years.	C	0	6	50		Gross	--	--	13,208	142	No benefits if employed.	--
Slovenia	E+C: 12 months in 18 months.	C	--	9	70	60 (after 3 months)	Gross earnings of last 12 months (incl. bonuses)	4,014	24	12,041	71	A beneficiary who is seeking full-time work keeps receiving a proportional amount of UI if they get part-time work (up to 20 hours per week).	--
Spain	C: 360 days in 6 years.	C	0	24	70	60 (after 6 months)	Gross	5,964	24	13,046	53	Benefits are reduced in proportion to hours worked.	Increased minimum and maximum benefit if person has dependent children.
Sweden	E: 6 months in last year, C: been a member of an insurance fund for 12 months.	V	7	35	80	70 (after 9 months). 65 for Job and Development Guarantee (after 14 months).	Gross	83,200	23	176,800	48	Benefits are reduced in proportion to days worked.	--
Switzerland	E+C: 12 months in 2 years.	C	5	18	70		Gross	--	--	88,200	117	"Compensation payment for intermediate earnings": benefits are equal to 70% of the difference between insured earnings and current earnings.	Rate increases by 10 percentage points if children or low income.
Turkey	E: 600 days in 3 years E+C: 120 days continuously, immediately before	C	0	10	40		Gross	3,650	17	7,301	34	No benefits if employed.	--
United Kingdom	C: 12 months in 2 years.	C	3	6	Fixed amount (10% of AW).		--	--	--	--	--	Income over GBP 260 (520 for couples) reduces benefit by same amount.	--
United States (9)	E: 20 weeks (plus minimum earnings requirement).	C	0	23	53		Gross	6,084	13	18,824	41	Earnings less than gross benefit are deducted at 50% rate; Earnings exceeding gross benefit are subtracted from 1.5 times the gross benefit amount. Individuals earning more than 1.5 times their gross benefit amount are ineligible.	USD 312 for each dependant.

Source: OECD (www.oecd.org/els/benefitsandwagespolicies.htm)
Notes: Where benefits are conditional on work history, the table assumes a long and uninterrupted employment record for a 40 year-old. AW is the average full-time wage.
1. Single worker without children (benefits may depend on family situation). All benefit amounts are shown on an annualised basis. "--" indicates that no information is available or not applicable.
2. Gross = gross employment income; SSC = (employee) social security contributions; Net = Gross minus income taxes minus SSC.
3. Duration of Employment Insurance (EI) payments depends on unemployment rate in the relevant EI region. The 47-week duration shown here relates to an unemployment rate of 9 percent in Ontario.
4. Maximum proportion is set with reference to average wages in the preceding year. Measure of average wages used may not align with AW used here.
5. Reduced payment rate if weekly earnings below certain amounts, s of payment are made. If dependent adult is employed, supplement is reduced or suppressed depending on income level.
6. For employees with a temporary reduction of working hours there is also the CIG scheme, which pays benefits of 80 percent of average gross earnings for non-worked hours.
7. At least 24 percent of AW during the preceding calendar year or 48 percent of AW over previous three years.
8. The basic benefit amount is adjusted with the length of the employment record: 80 percent for under 5 years, 100 percent for 5-20 years and 120 percent for over 20 years.
9. The information reflects the situation of the Michigan unemployment benefit scheme of which payment duration has been extended due to high unemployment rates. Emergency Unemployment Compensation and Extended Benefits are paid after exhaustion of regular UI (26 weeks) and at lower rates.

Table A1.2: Unemployment assistance benefits, 2010

	Employment record in months(2)	Waiting period (days)	Duration (months)	Payment rate	Maximum benefit		Tests on		Permitted employment and disregards	Additions for dependent family members
					National currency	% of AW	Assets	Income		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]		[8]	[9]
Australia	--	7	No limit	Fixed amount	12,033	18	Yes	Family	Disregard of AUD 1612, 50% withdrawal up to AUD 6500, 60% above. Couple: no UA for higher earner once income above AUD 20527, spouse's UA reduced by 60% of earnings above this amount.	Parenting payment for dependent children (generally replaces UA). Partner allowance.
Austria	UI	--	No limit	92% of basic UI benefit (3)	15,010	39	Yes	Family	No UA if earnings above EUR 4396. UA reduced if spouse's earnings above EUR 5940. Limit increased by EUR 2970 for each child.	Each dependant: EUR 354.
Estonia	180 days in 12 months	7	270 days (including time on UI benefits)	Fixed amount	12,239	8	--	Individual	No payments if annual income exceeds EUR 12239	--
Finland	--	5	No limit	Fixed amount	6,613	17	--	Family	Limits can be suppressed under certain conditions. Spouse's income only counted above EUR 6432. Disregards of EUR 3036 for singles, 10176 for couples and lone-parents, increased by EUR 1272 for each dependent child. UA reduced (by 75% for a single, 50% for a couple) for gross earnings exceeding disregard; special rules for earnings from part-time work.	EUR 1254, 1840 and 2371 for 1, 2 and 3+ children respectively.
France	UI and 60 in last 120	--	6 months (renewable)	Fixed amount	5,450	16	--	Family	Disregard for earnings less than EUR 7267 then 1/1 reduction up to EUR 12718; for couple limits are EUR 14532 and 19985.	Some for older workers depending on age and employment record.
Germany (4)	--	--	No limit	Fixed amount	4,308	10	Yes	Family	Disregards of EUR 1200, then the withdrawal rate of UB II is 80% up to gross income of EUR 9600 and 90% in a range between EUR 9600 and EUR 14400 (EUR 18000 if children).	Additions for each child depending on age.
Greece	UI or 60 days in the year	--	Every 3 months in 3 instalments	Fixed amount	3,101	15	--	Family	No payments if annual income exceeds EUR 9098.	--
Hungary	UI	--	3 or 6 months	Fixed amount	352,800	14	--	individual	For short term (<90 days) employment benefit is suspended. For "employment booklet" programme the benefit is reduced by amount earned.	--
Ireland	--	3	No limit	Fixed amount	10,192	32	Yes	Family	UA is reduced by 60% of average net weekly earnings if working less than 3 days/week.	21% of AW per adult, and 5% of AW per child.
New Zealand	--	0-14	No limit	Fixed amount	11,536	24	--	Family	Gross income above NZD 4160 reduces benefit at 70% rate.	Rates depend on family type.
Malta	--	--	No limit	Fixed amount	5,192	29	Yes	Family	None	EUR 424 (2% of AW) per dependant.
Portugal	UI or 6 in last 12 (5)	--	12 (after UI) or 24	Fixed amount	4,025	23	--	Family	Family income less than EUR 4025/person. UA is zero if there are any earnings.	EUR 1006 if dependants present.
Spain	--	--	--	--	--	--	--	--	--	UA only paid to people with dependents unless aged over 45. Maximum benefit of 21% of AW, paid for up to 30 months.
Sweden	6 or recent graduate	7	14 (after which can become eligible for Job and Development Guarantee).	Fixed amount	83,200	23	--	Individual	Benefit not paid for days worked. Proportionally reduced in part-time work case.	--
United Kingdom	--	3	No limit	Fixed amount	3,403	10	Yes	Family	Earnings disregards are GBP 260, 520 and 1040 for single persons, couples and special groups (e.g. lone parents) respectively. Other forms of income reduce benefits on a 1/1 basis.	GBP 1940 for spouse, plus various premiums.

Source: OECD (www.oecd.org/els/benefitsandwagespolicies.htm)
Notes: Where benefits depend on work history or family situation, data is for a long and uninterrupted employment record for a 40 year-old single without children. AW is the average full-time wage. All benefit amounts are shown on an annualized basis. "--" indicates that no information is available or not applicable.
2. UI = after exhausting UI benefits.
3. Rate can be increased to 95 percent for low UI levels.
4. As of 1st January 2005, unemployment assistance and social assistance for persons who are able to work were combined into one benefit, the basic jobseekers allowance (unemployment benefit II). Available for persons who are able to work and whose income is not sufficient to secure their own and their family's livelihood.
5. There is no employment condition for a first-time job seeker with dependants.
6. There are unemployment assistance-like schemes in some cantons in Switzerland, but these have been declining in importance and there is no national framework.

Table A1.3: Minimum-income benefits, 2010

	Determination of rates		Behavioural requirements				Maximum amounts (in % of AW)						Means-test		Topping-up of UB possible?
			Job search	Registration with PES	Participation in integration measures	Work	Head of household	Spouse/ partner	Per child		Other		Disregard	Benefit withdrawal	
	[1]		[2]	[3]	[4]	[5]	[6]	[7]	[8]		[9]		[10]	[11]	[13]
Australia(2)	--	--	--	--	--	--	--	--		--		--	--	--	--
Austria	National minimum (average shown)	--	--	Yes	Yes	--	17	9		4	Rent	--	None	100%	Yes
Belgium	National rates	Age>=18.	--	--	--	--	21	7	Depends on age & number	4-9		--	EUR 310 (250) net income per year with (without) children.	100%	--
Bulgaria	National rates	Aged>=17	Yes	Yes	Yes	Yes	7	7		9	Social assistance for heating	4	None	100%	Yes
Canada (Ontario)(3)	Sub-national	--	Yes	--	Yes	Yes	16	11	Depends on age & number	1-1	Rent and regularly occurring special needs	--	None	50%	--
Czech Republic (4)	National rates	--	Yes	Yes	Yes	"Depends on circumstances"	13	10	Depends on age	7-9		--	--	70% for income from work	Yes
Denmark	National rates	Age>=25 for full rates. Lower rates from age	Yes	Yes	Yes	--	31	31	1st child.	10	Rent	--	DKK 27513 of net income from work.	100%	Rare
Estonia	National rates	--	Discretionary	Discretionary	Discretionary	Discretionary	8	6		6	Allowance for lone parents	2	Housing costs (up to a limit)	100%	--
Finland	National rates	--	Benefit can be reduced if not satisfied	Benefit can be reduced if not satisfied	Benefit can be reduced if not satisfied	Benefit can be reduced if not satisfied	13	9	Depends on age & number	7-8	Rent, health care, work related expenses.	--	20% of net earnings (maximum EUR 1800).	100%	Yes
France	National rates	Age>25	Yes	Yes	Yes	--	16	8	Depends on number	5 - 6		--	Upon taking up employment: 100% of earnings for 3 months.	100%	--
Germany (6)	National rates	Age>15	Yes	Yes	Yes	Yes	10	9	Depends on age	6-8	Extra allowances for additional needs, rent, heating costs.	--	Disregards of EUR 1200, then 80%, 90% and 100% withdrawal rate in stages depending on income.	--	--
Greece	--	--	--	--	--	--	--	--		--		--	--	--	--
Hungary	National rates	Age>18	Yes	Yes	Yes	Yes	12	11	Depends on number	9-10		--	None	100%	Yes
Iceland (Reykjavik)	Sub-national	Age>17	--	--	--	--	29	17	None payable.	--	Unemployed age 18-24 living at home.	14	None	100%	--
											Funeral costs, dental bills, etc.	--			
Ireland	National	--	Yes	Yes	Yes	Yes	32	21		5	Rent/mortgage interest supplement.	--	--	100%	Rare
Israel	National	Age>19	Yes	Yes	Yes	Yes	17	6	Depends on number	0 - 3	Higher rates for lone parents.	--	From 28 to 61% of AW depending on family type.	60-70% (depends on family type)	--
Italy	--	--					--	--		--		--		--	--
Japan (Tokyo)	Sub-national	Depends on age of family	Yes	No	No	No	21	11	Depends on age & number	7-11	various	--	Net earnings of at least JPY 100080 (up to JPY 398280 for higher earnings).	100%	Yes
											Child additional aid	3			
											Housing aid	14-21			

	Determination of rates		Behavioural requirements				Maximum amounts (in % of AW)						Means-test		Topping-up of UB possible?
			Job search	Registration with PES	Participation in integration measures	Work	Head of household	Spouse/ partner	Per child		Other		Disregard	Benefit withdrawal	
	[1]		[2]	[3]	[4]	[5]	[6]	[7]	[8]		[9]		[10]	[11]	[13]
Korea	National	--	Yes	No	Yes	--	14	10	Depends on number	7-7	Medical care, educational, childbirth, funeral, housing costs	--	30% of income earned under specific programmes.	100%	No
Latvia	National	--	Yes	Yes	--	--	8	8		9	Rent	--	None	100%	Yes
Lithuania	National	Aged >18	No	Yes	--	--	16	16		16	Provision of school supplies for pupils,	8	None	90%	Yes
Luxembourg	National	Age>24	Yes	Yes	Yes	Yes	30	15		3	Rent allowance.	--	30% of payment rate.	100%	--
Malta	National	Aged >=17	--	--	--	--	29	2		2	--	--	None	100%	Yes
Netherlands	National	Age>20	Yes	Yes	Yes	Varies by municipalities	33	10		--	Supplement for lone parent / annual bonus to promote job acceptance	8 / up to 5	up to 25% of earnings (municipality discretion), up to EUR 187/month, for 6 months.	100%	Yes
New Zealand (2)	--	--	--	--	--	--	--	--		--		--	--	--	--
Norway (8)	National	--	Yes	Yes	Yes	Yes	13	9	Depends on age	5-8	Housing benefit depending on family situation	11-25	None	100%	Yes
											Supplement for heating expenses.	--			
Poland	National		Yes	Yes	Yes	Yes	14	9		12	Permanent benefit depending for those permanently unable to work.	--	None	100%	Rare
Portugal	National	Age>17	Yes	Yes	Yes	--	13	13		7	Additional adults	9	New employment: 50% of earnings for 1 year. Otherwise 20%.	100%	--
Romania	National	Aged >=18	No	--	No	Yes	7	5	Depends on number	5	High maximum (+15%) if working	--	None	100%	--
Slovak Republic	National	--	No	No	No	No	8	6	1st child only, plus addition if more than 4	7-14	Health care, housing, protective and activation allowances	--	25 % of net income	100%	Yes
Slovenia	National		Yes	Yes	Yes	Yes	16	11		5	One-off extraordinary assistance for special material need		None	--	--
Spain (Madrid)	Sub-national	Age>24 unless children present	Yes	Yes	Yes	Yes	18	5		4	--	--	None	100%	Rare
Sweden	National guidelines, discretion for supplements.	--	Yes	Yes	Yes	Yes	12	8	Depends on age & number	6-10	Medical costs, transport, child care	--	None	100%	Rare
Switzerland (Zurich)	National guidelines, discretion for supplements.	--	Yes	Varies by canton or benefit office	Yes	Varies by canton or benefit office	15	8		5	Supplement from 3rd person aged >16.	4	--	100%	--
Turkey	--	--	--	--	--	--	--	--		--		--		--	--
United Kingdom	National	Age>24 or lone parent.	Yes	Yes	Yes	Yes	10	6	Family supplement	3	--	--	GBP 260 / 520 / 1040 for a single person / couple / lone parent.	100%	--
United States (9)	National	--	Yes	Yes	Yes	Yes	5	4		4	--	--	Occasional income up to USD 120, excess shelter expense (rent, utility) subject to conditions.	100%	--

Source: OECD (www.oecd.org/els/benefitsandwagespolicies.htm)
Notes: All amounts are shown on an annualized basis. "--"indicates that no information is available or not applicable. AW is the average full-time wage.
2. Low-income individuals actively looking for work typically receive the means-tested unemployment assistance (UA) benefit described in the UA table (unlimited duration and not subject to employment record conditions). All "Social Assistance" amounts shown for Australia and New Zealand in this publication therefore relate to means-tested unemployment benefits. In Australia, another type of benefit (Special Benefit) can be available to people in severe financial hardship, who have no other means of support and for whom no other benefit is available. Special Benefit is not considered in the results reported here.
3. Basic allowance plus shelter allowance.
4. The Living Minimum is paid for 6 months and then the Subsistence minimum that has lower rate is used for the calculation of allowance for living for adult person as a "sanction" for indolent person being out of work.
6. As of 1st January 2005, unemployment assistance and social assistance for persons who are able to work were combined into one benefit, the basic jobseekers allowance (unemployment benefit II). Persons who are unable to work receive Social Allowance benefits of which basic elements are the same as UBII.
7. The benefit is made up of two parts: an individual amount depending on the age of the child (and sometimes the adult) concerned; and a household amount that depends on the size of the household. Rates shown are those for Tokyo.
8. The data for subsistence allowance is based on the governmental guidelines, while the housing allowance data is based on the guidelines of the municipality of Trondheim.
9. Amounts shown for food stamps only. Temporary Assistance for Needy Families (TANF) is available for some families, mainly lone parents.

Table A1.4: Guaranteed minimum income benefit levels in Riga, 2005-2013

(LVL per person per month)	2005	2006	2007	2008	2009	2010	2011	2012	2013
Working age persons	21	24	27	27	37	40	40	40	40
Children	40	40	48	48	48	45	45	45	45
Pensioners (age or disability)	40	40	90	90	90	90	90	90	90
Other categories:									
Children and young people under the age of 20 who are enrolled in a comprehensive school or receive vocational training	40	40	48	48	48				
One parent or guardian in families with children	40	40	48	48	48				
Orphaned and abandoned children who have started independent life up to age 24	40	40	48	48	48				
For continuous (longer than one month) incapacitated persons, able-bodied people 3 years before retirement age and one year after the restoration of working capacity due to disability expiration	40	40	48	48	48				

Source: Welfare department of the Riga City Council.

Table A1.5: Average of marginal effective tax rate at different wage levels, 2011
METRs over different current earnings ranges, not entitled to UI benefits but entitled to Social Assistance if applicable

Household earnings (% of AW)		BE	DK	DE	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK	CZ	EE	HU	LT	LV	MT	PL	SK	SI	BG	RO
Single parent without children																										
From :33%	to: 67%	59	74	54	29	50	50	41	60	74	40	24	50	40	53	49	24	38	26	33	21	61	4	46	22	31
From :67%	to: 100%	55	49	50	30	38	31	39	43	48	46	39	43	30	32	42	24	46	27	33	37	30	30	43	22	32
From :100%	to: 133%	59	55	50	33	45	52	50	49	49	49	41	48	48	35	31	24	47	27	33	35	30	54	43	22	32
From :133%	to: 167%	60	56	50	35	48	52	50	49	55	44	50	48	54	42	31	24	38	26	33	35	30	29	53	22	31
Single parent with 2 children																										
From :33%	to: 67%	59	71	82	18	73	37	11	62	42	70	51	65	48	80	48	22	27	83	57	53	79	4	55	22	32
From :67%	to: 100%	56	60	49	31	47	91	51	58	73	45	39	49	40	70	45	24	43	43	33	47	44	108	69	22	47
From :100%	to: 133%	59	63	43	33	34	60	57	49	49	49	42	48	48	40	31	24	47	27	33	25	29	54	44	22	33
From :133%	to: 167%	60	56	46	33	37	52	52	49	55	44	63	48	54	42	31	24	38	26	33	31	30	29	51	51	31
One-earner married couple without children																										
From :33%	to: 67%	49	94	64	17	59	103	33	107	82	59	39	81	63	66	70	22	44	43	39	12	62	1	51	22	31
From :67%	to: 100%	50	64	45	32	39	30	42	26	51	46	28	43	30	32	28	24	46	27	33	34	30	21	41	22	32
From :100%	to: 133%	56	55	40	33	37	35	50	33	52	49	37	48	48	35	31	24	47	27	33	23	30	54	43	22	33
From :133%	to: 167%	60	56	38	31	37	52	51	40	55	44	39	48	54	42	31	24	38	26	33	31	30	29	48	22	31
One-earner married couple with two children																										
From :33%	to: 67%	47	95	80	13	73	76	4	108	66	96	56	98	77	80	89	30	65	92	69	21	38	28	61	22	33
From :67%	to: 100%	51	97	50	31	53	67	51	47	78	45	43	52	30	77	35	24	45	66	33	47	48	21	61	22	42
From :100%	to: 133%	56	62	40	33	36	45	58	33	52	49	38	48	48	40	31	24	47	27	33	25	39	54	52	22	34
From :133%	to: 167%	60	56	37	31	35	52	53	40	55	44	50	48	54	42	31	24	38	41	33	31	30	29	48	22	32
Two-earner married couple without children																										
From :67%+33%	to: 67%+67%	59	44	46	29	46	31	42	30	45	40	29	33	29	32	27	24	38	26	33	18	30	31	35	22	31
From :67% +67	to: 67%+100%	55	43	49	30	38	31	39	38	46	46	39	43	30	32	31	24	46	27	33	29	30	30	43	22	32
From :67+100%	to: 67+133%	58	53	45	33	37	35	48	45	49	49	39	48	48	35	31	24	47	27	33	35	30	30	43	22	32
From :67+133%	to: 67+167%	59	56	45	35	42	52	50	49	55	44	39	48	54	42	31	24	38	26	33	35	30	29	53	22	31

Household earnings (% of AW)		BE	DK	DE	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK	CZ	EE	HU	LT	LV	MT	PL	SK	SI	BG	RO
Two-earner married couple with two children																										
From :67%+33%	to: 67%+67%	59	53	46	23	42	40	48	30	41	40	30	33	29	37	27	24	38	42	33	20	37	16	52	22	32
From :67% +67	to: 67%+100%	55	43	48	30	36	31	41	38	46	45	50	43	30	32	31	24	43	27	33	29	30	45	42	22	32
From :67+100%	to: 67+133%	58	53	43	33	37	35	51	45	49	49	39	48	48	35	31	24	47	27	33	35	30	30	47	52	32
From :67+133%	to: 67+167%	59	56	41	35	37	52	53	49	55	44	39	48	54	42	31	24	38	26	33	35	30	29	46	22	31

Source: Joint European Commission-OECD project Tax & benefits indicators DATABASE

Annex 2

Simulations of the effects on the proposed changes in minimum wage and personal allowance in Latvia[50]

This note discusses possible effects of the proposed increases:

- in the minimum wage from LVL 200 to LVL 225
- in the personal non-taxable allowance from LVL 45 to LVL 84 for employees earning up to minimum wage and to LVL 84-0.18*(wage-225) for those earning between LVL 225 and LVL 441.67
- in the non-taxable dependants' allowance from LVL 80 to LVL 98

According to self-reported LFS data, between 10% and 20% of all workers are on just minimum wage (the uncertainty is related to the fact that some 10% of responses are imputed from SRS (VID) data).

In other words, the minimum wage is binding for a non-negligible share of workers.

Table A2.1: employees by monthly net (after taxes) earnings in the main job by quarter, %

	2011				2012			
	q1	q2	q3	q4	q1	q2	q3	q4
TOTAL	100	100	100	100	100	100	100	100
Under 200.00	40.4	39.2	37.3	35.9	37.3	34.4	32.2	32.8
..of which minimum wage or less*	23.8	24.3	21.7	21.4	22.5	20.4	20.2	19.3
200.01-300.00	27.2	27.6	28.3	28.4	25.4	27.2	29.4	26
300.01-500.00	19.7	20.4	21	21.7	22.5	23.8	23.6	24.5
500.01-1000.00	6.1	5.8	7.2	7.0	7.8	7.9	8.2	9.9
1000.01 and over	1.0	0.9	0.9	1.0	1.2	1.5	1.2	1.6
Was not calculated	3.1	3.6	3.4	2.8	2.6	3.0	2.9	2.4
Was calculated but not paid	0.1	0.3	...	0.3	0.2	0.4	0.3	...
Unspecified**	2.4	2.2	1.9	2.9	3	1.8	2.2	2.8

Notes. * Net wages and salaries calculated from minimum gross wages and salaries, i.e. from LVL 200 in 2011 and 2012.
** - For those persons, who did not indicate size of their wage in the Labour Force Survey, from 2009 data supplement with information on wages from State Revenue Service data base was carried out.
Source: Labour Force Survey results (Statistics Latvia online database, Table NB14)

Table A2.2 presents simulated effects of proposed changes for a minimum wage earner without dependants under various assumptions on the envelope wage.

Employees on pure minimum wage will see a 18% increase in net earnings, but their employers – a 12.5% in labor cost for this category of workers. Tax revenues will go up by 4.75 LVL per month for every such worker.

[50] This annex is entirely based on a note prepared by M. Hazans

For employees receiving the minimum wage amended by an envelope, one of possible scenarios is no change in net earnings, while their employers will face an increase in labor cost in a range between 0.7% and 1.4% for this category of workers (assuming the envelope wage between 100 and 400 LVL). Tax revenues will go up by 4.75 LVL per month for every such worker.

Table A2.2: Simulated effects of proposed changes for a minimum wage (LVL 200) earner without dependants, assuming that the envelope part adjusts to offset gain in net earnings, LVL

Old system			New system			Change		
Envelope wage	Total net wage	Labor cost	Envelope wage	Total net wage	Labor cost	Net wage	Labor cost	Tax revenue
0	146.08	248.18	0.00	172.35	279.20	26.27	31.02	4.75
100	246.08	348.18	73.73	246.08	352.93	0.00	4.75	4.75
200	346.08	448.18	173.73	346.08	452.93	0.00	4.75	4.75
300	446.08	548.18	273.73	446.08	552.93	0.00	4.75	4.75
400	546.08	648.18	373.73	546.08	652.93	0.00	4.75	4.75

Note that the envelope payments are likely to be in whole LVL (or euro), so the above results should be seen as indicative.

The likely effects are, however, quite different for employees with legal earnings between 225 and 440 LVL.

If there is no envelope wage and the employer won't increase the gross pay, the worker will see an increase in net earnings but the tax revenues will fall by the same amount. Table A2.3 summarizes the results for legal earnings equal to 250, 300, 350 and 400 LVL assuming no, one or two dependants.

Table A2.3: Effects of proposed changes on net earnings of a higher-than-minimum-wage earner without envelope wage (assuming no change in gross earnings)

Gross legal wage	# of depen-dants	Net wage		Net wage change		Tax revenue change	
		Old	New	LVL	%	LVL	%
250	0	179.90	188.18	8.28	4.6%	-8.28	-11.8%
300	0	213.72	219.84	6.12	2.9%	-6.12	-7.1%
350	0	247.54	251.50	3.96	1.6%	-3.96	-3.9%
400	0	281.36	283.16	1.80	0.6%	-1.8	-1.5%
250	1	199.10	211.70	12.60	6.3%	-12.6	-24.8%
300	1	232.92	243.36	10.44	4.5%	-10.44	-15.6%
350	1	266.74	275.02	8.28	3.1%	-8.28	-9.9%
400	1	300.56	306.68	6.12	2.0%	-6.12	-6.2%
250	2	218.30	235.22	16.92	7.8%	-16.92	-53.4%
300	2	252.12	266.88	14.76	5.9%	-14.76	-30.8%
350	2	285.94	298.54	12.60	4.4%	-12.6	-19.7%
400	2	319.76	330.20	10.44	3.3%	-10.44	-13.0%

On the other hand, for workers receiving above-minimum wage amended with an envelope payment, one likely scenario is that the legal part will stay unchanged while the envelope part will be reduced to offset (at least partly) the gain in net earnings caused by increased nontaxable allowances. Net earnings of this type of workers are thus likely to stay unchanged or (especially for those with dependants) slightly increase, employers labor costs will go down (the change will not exceed 1% though), and tax revenue will decrease by the same or larger amount. Table 4 illustrates by looking at

three plausible combinations of legal and envelope wages. This scenario probably will be found when the same employer has also workers on minimum wage and therefore is under pressure to compensate increased cost of that category of labor. Otherwise both legal and envelope parts of the compensation (ab hence employer's labor cost) might stay unchanged, in which case increase in employees' net earnings will be larger but the fiscal effect - the same as in Table 4.

Table A2.4: Simulated effects of proposed changes for a higher-than-minimum-wage earner assuming that the envelope part adjusts to [partly] offset the gain in net earnings, LVL

Old system				New system				Change		
Wage				Wage						
Legal	Envelope	Total (net)	Labor cost	Legal	Envelope	Total (net)	Labor cost	Net wage	Labor cost	Tax revenue
A. No dependants										
250	250	429.9	560.2	250	241.7	429.9	551.9	0.00	-8.28	-8.28
300	300	513.7	672.3	300	293.9	513.7	666.2	0.00	-6.12	-6.12
400	250	531.4	746.4	400	248.2	531.4	744.6	0.00	-1.80	-1.80
B. One dependant										
250	250	449.1	560.2	250	241.7	453.4	551.9	4.32	-8.28	-12.60
300	300	532.9	672.3	300	293.9	537.2	666.2	4.32	-6.12	-10.44
400	250	550.6	746.4	400	248.2	554.9	744.6	4.32	-1.80	-6.12
C. Two dependants										
250	250	468.3	560.2	250	241.7	476.9	551.9	8.64	-8.28	-16.92
300	300	552.1	672.3	300	293.9	562.9	666.2	10.80	-6.12	-16.92
400	250	569.8	746.4	400	248.2	584.9	744.6	15.12	-1.80	-16.92

To derive the total labor market and fiscal effect of the changes one needs plausible assumptions on distributions of various combinations of legal and envelope wages.

Finally, the employers can be under pressure from (employees on higher-than-minimum wage+ envelope) to increase either the legal or the envelope part. To what extenet this will actually happen is an empirical question which requires a further investigation. In this case the tax revenue gain will be at the expense of increase in total labor cost and, hence, fall in labor demand.

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Scientific research: Latvia: "Who is Unemployed, Inactive or Needy? Assessing Post-Crisis Policy Options"

REVIEW OF KEY DESIGN PARAMETERS AND LEGISLATION FOR SOCIAL ASSISTANCE PROGRAMS IN LATVIA

Boryana Gotcheva and Emily Sinnott

June 2013

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Abbreviations

ALMPs	Active Labor Market Programs
ARGE	Arbeitsgemeinschaft or jobcenter, Germany
BA	Public employment service, Germany
CCT	Conditional Cash Transfer
CWI	Center for Work and Income, The Netherlands
GDP	Gross Domestic Product
GMI	Guaranteed Minimum Income
EC	European Commission
ECA	Europe and Central Asia
EU	European Union
LVL	Latvian Lat (national currency)
MISSOC	The EU's Mutual Information System on Social Protection
OECD	Organization for Economic Cooperation and Development
PRWORA	Personal Responsibility and Work Opportunity Act
TANF	Temporary Assistance to Needy Families
SILC	Survey of Incomes and Living Conditions
SSN	Social Safety Net
UK	United Kingdom
UWV	Administrative office for employed persons insurance, The Netherlands

Executive Summary[1]

Similarly to other EU Member States[2] Latvia operates a last-resort social assistance scheme. This note benchmarks the guaranteed minimum income scheme (GMI) in Latvia to similar benefits in other middle- and high-income countries. It also provides GMI design-related arguments to the explanation of its performance outcomes. The report complements, and builds on the findings of other analytical work in the technical assistance package to the Government of Latvia, that analyzes in detail (a) the performance of the GMI scheme in terms of targeting accuracy, coverage of the poor, generosity and poverty impact; (b) the work incentives and disincentives in the tax and benefit systems ('whether work pays'); and (c) the profile of GMI recipients and the patterns of their participation in the scheme.

Latvia's GMI is a very well-targeted to the poor, but at the same time is very small in terms of coverage and financing. Since the crisis, GMI has increased its share in spending from 13 percent of the Latvian municipalities overall social assistance budget in 2006 to 23.9 percent by January 2013. Even with this expansion, compared to other EU countries the expenditure on GMI is moderate at 0.16 percent of GDP in 2011. Over 90 percent of the resources allocated for GMI reach the poorest 20 percent of the population and over 94 percent of them go to the poor.

GMI reaches only a fraction of those who are identified as 'needy'. GMI is received by very few people—3 percent of all population according to most recent household survey (Survey of Incomes and Living Conditions, SILC 2011) data[3]; and close to 14 percent of the poorest 20 percent. GMI doesn't appear to provide adequate income support—its overall generosity of GMI is low; the benefit increases disposable income most notably in the poorest quintile where the share of GMI in post-transfer income is 22.2 percent (SILC 2011).

The GMI design has contributed to these performance outcomes. Low coverage and high targeting accuracy go hand in hand and can be explained by the same design features. In the case of Latvia, they follow from the application of low-income thresholds for access and other restrictive eligibility criteria to identify those with insufficient means to support themselves. Low coverage is also the outcome of limited financing due to delegated financing responsibilities for GMI to the municipalities, some of which lack a strong revenue base. Eligibility thresholds or benefit levels are not linked to objective minimum income or a consumption-standard poverty line, which means that there are no rules for benefit update, and that the risk of erosion of the benefit's purchasing power is significant.

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[1] The note was written by Boryana Gotcheva with inputs from Emily Sinnott and David Newhouse.
[2] All EU Member states have last-resort social assistance / guaranteed minimum income schemes, except for Greece.
[3] This is consistent with administrative data showing that around 2 -3 percent of the population of Latvia is receiving GMI benefit. Nationwide, the number of GMI recipients started to decrease in 2011 and 2012**.** In early 2012 over 63 thousand people were accessing GMI (around 3 percent of the total population), but by the end of 2012 the beneficiary numbers had decreased to 41 thousand persons, or 2 percent of the total population.

The Latvia GMI scheme is 'restricted'. Such schemes are operated most often by new EU Member States like Estonia, Lithuania, the Slovak Republic, Poland, Hungary and Bulgaria, but also by some of the 'old' EU Member States like Italy. They apply rather restrictive eligibility criteria to identify eligibility and subsequently end up with limited coverage of those with insufficient means to support themselves. Of key importance is the income test. Latvia's GMI is granted based on a comprehensive income test which becomes more encompassing with time; even incomes from child benefits are counted which limits the access of families with children, despite the high child poverty in Latvia. At the same time, other design features show favor to children. The Latvia GMI provides the same benefit for children and adults (there are no explicit or implicit equivalence scales). In addition, during the crisis the maximum GMI allowance for children was temporarily (until end-2012) increased and set at a higher level than the GMI ceiling for adults. However, it is not clear to what extent per capita GMI levels could offset the negative impact of not disregarding child benefits as incomes in GMI eligibility formula. The asset test is less comprehensive, and as a result the GMI reaches to those who are short of income, even temporarily, such as unemployed, but is less effective in identifying the chronic poor who are lacking both incomes and assets.

While the Latvia GMI's design is overall consistent with prevailing EU models, some of its features depart from the prevailing EU models. As elsewhere in the EU, the Latvia GMI is centrally designed, extended based on means test and applies benefit formula where the household's actual income (if existent) is subtracted from the maximum allowance for which this household would be eligible based on its size. At the same time, several design features depart from the prevailing solutions:

- Municipalities in Latvia have wider discretion in the design of GMI, which – as mentioned already - is financed by the budgets of municipalities (except for the time of the crisis when expansionary changes took place due to adding state co-financing to the GMI scheme, and withdrawn in 2013) while in the majority of EU countries financing of such schemes comes either from the state/central budget or is shared by the state and local or regional budgets.
- Latvia does not apply equivalence scales. Most of the EU states apply implicit or explicit equivalence scales to account for the shared use of resources within a household.
- Latvia does not 'anchor' the GMI level to an objective welfare standards despite that such a standard (minimum subsistence) is calculated. Most of the schemes link benefit levels to poverty lines or other minimum subsistence standards and update them with wage or consumer price growth.
- Compared to many EU member states, Latvia has used more often earned income disregards to 'open' the GMI scheme for low income earning households, however the use of these instruments to encourage exiting social assistance and moving into employment.

1. Economic and welfare context

Social assistance in general and the Guaranteed Minimum Income (GMI) program in particular, operates in a specific context in Latvia that increases redistributive pressures and requires flexible, proactive and effective responses to emerging social welfare risks. In the first place, the macroeconomic and fiscal environment has been volatile and calls for a safety net which is responsive and adaptable to changing conditions. Second, the economic and financial crisis drew renewed attention to the close link between social assistance and labor markets. Social assistance became increasingly important for those who lost jobs due to the crisis. In the post-crisis period the incidence of long-term unemployment rose, along with the number of long-term unemployed who have exhausted their contributory unemployment benefit and have no access to other 'higher tier' benefits. This confronts social assistance with a new challenge: to cover those not eligible for unemployment insurance programs, while preventing the long-term unemployed from becoming long-term 'clients' of last-resort social assistance. Third, in the post-crisis times, there has been an increase in the number of able-bodied recipients of social assistance for whom passive benefits are not sufficient to tackle poverty. Together these factors call for policies and programs that are (a) employment-oriented, (b) are reducing the barriers to employment take up and, (c) are promoting activation. The higher number of working poor requires shifting efforts to design and implement policies that 'make work pay' and provide support to individuals and households even if they have jobs. In the post-crisis period, labor market inclusion is increasingly becoming the key to reducing poverty, and for social inclusion. Finally, as the post-crisis regional disparities increase, the need for social assistance which is responsive to local needs also increases.

In Latvia, the pressure on the GMI to mitigate crisis-related welfare losses is particularly high. In Latvia, the impact of the economic crisis was particularly adverse: the gross domestic product (GDP) decreased by 18 percent in 2009; monthly household income decreased by 16 percent compared to 2008; the share of households receiving income from wages or pensions declined from 66 percent in 2008 to 59 percent in 2009, while at the same time the share of households on social transfers increased from 29 percent to 37 percent (Kula 2011). At the time of the crisis, Latvia reinforced the GMI scheme by adding state co-financing to its (original) municipal financing, also by expanding coverage, and increasing generosity, especially for children in GMI recipient households. The GMI level was set at LVL27 in 2007-2008. It rose to LVL37 between January and September 2009 and in October 2009 to LVL40 for adults and LVL45 for children, where it remained, financed half by the central government and half by municipalities until end-2012. As a result the spending on social exclusion (ESPROSS classification) increased by 3.8 percent in 2009 and by 6.1 percent in 2010 (Kula 2011). As of the beginning of 2013, central government co-financing was withdrawn and the benefit level was unified for adults and children and reduced to LVL35 per person per month.

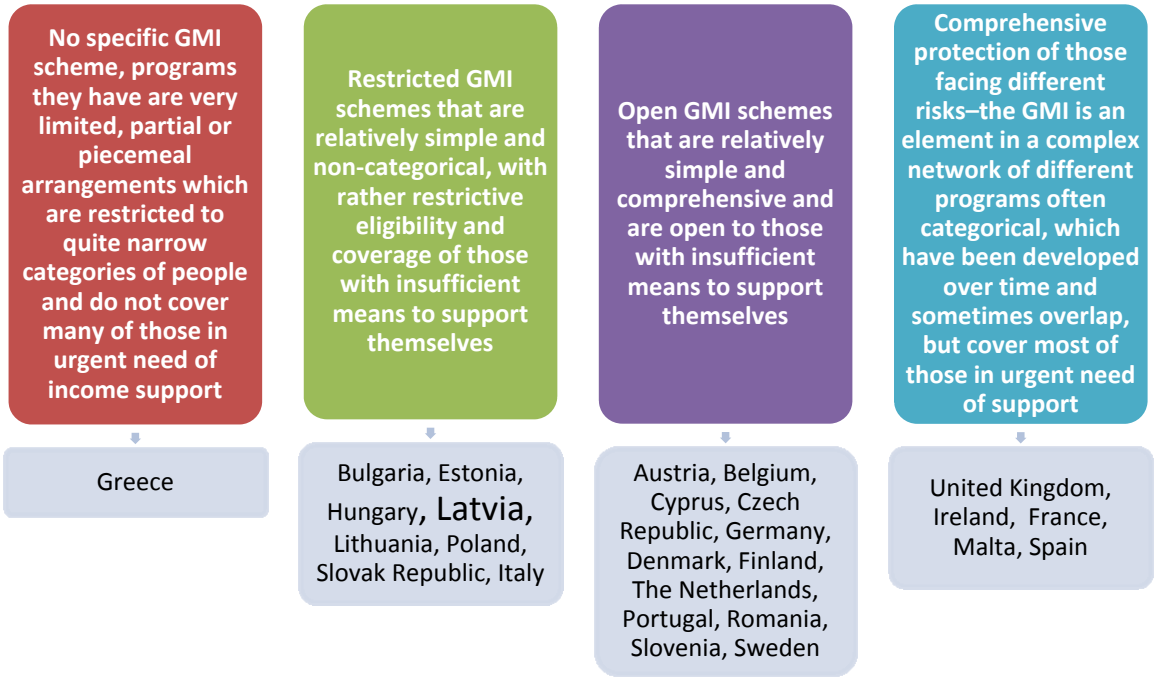
2. Main GMI design characteristics and their consistency with European models

Definitions This note, and also all other pieces of analytical work on social protection in this technical assistance task, define social protection as combination of contributory (social insurance) and non-contributory (social assistance) transfers and labor market programs. The understanding of social assistance is broad. It includes all non-contributory transfers, namely three main groups of programs: (a) last-resort social assistance (or social assistance in narrow sense), which is usually means-tested and aimed at guaranteeing a minimum income and/or consumption level for the poorest segment of the population; (b) family and child protection benefits and (c) non-contributory disability benefits[4]. The guaranteed minimum income program (GMI) in Latvia is its last-resort social assistance program. Latvia also implements a housing benefit as a separate means-tested entitlement. According to the national definitions, social assistance in Latvia has narrower understanding; it is limited to only those benefits that are means-tested and paid and ensured by municipalities, i.e., the GMI, housing benefits and other benefits paid by municipal budgets. The family benefits, namely child care benefit, state family benefit and other family related benefits, are paid out of the state budget and not legally defined as „social assistance". This note will focus on the GMI program for which there are no discrepancies in definitions and understanding of objectives. References to 'social assistance', if any, will however relate to the broader category as understood and used in the EU member states and beyond Europe, namely (a) last-resort social assistance; (b) non-contributory disability benefits, and (c) family and child protection benefits, without further differentiation based on whether the respective benefit is categorical or means-tested or whether it is financed by the state or by municipal budgets.

Overall, the model of the Latvia GMI is consistent with the prevailing models of 'minimum income' social assistance programs that exist in the European Union (EU) Member States. The EU GMI models can be tentatively divided into ***four broad groups*** ranging from the absence of guaranteed minimum income support to a comprehensive social assistance system that protects against a wide range of diverse social risks. The tentative grouping of country programs in the EU Member States is presented in Figure 1. Latvia falls within one of the "middle" categories, namely the category of ***countries with restricted GMI schemes***: Most of the schemes in this group are operated by new EU Member States like Estonia, Lithuania, the Slovak Republic, Poland, Hungary and Bulgaria, but also by some of the 'old' EU Member States like Italy. This category encompasses minimum income schemes that are relatively simple by design, non-categorical/non-universal, with rather restrictive eligibility criteria and subsequently with limited coverage of those with insufficient means to support themselves.

[4] In addition, some EU and OECD countries have also non-contributory unemployment allowance.

Figure 1: Types of GMI Programs in the EU Member States (2012)



Source: Compiled using country-specific data from the EU's Mutual Information System on Social Protection, MISSOC, as of July 1, 2012

The Latvia GMI has numerous similarities with, but also differences from last-resort social assistance programs in the rest of the EU Member States. As already mentioned, there is no single and universal GMI model which can serve as a baseline for benchmarking or a 'best practice example' for policy advice. Each county model has been designed to fit into the overall country concepts of support to vulnerable population groups. The Latvia GMI shares numerous common features with other GMI schemes in Europe. It provides noncontributory assistance when persons (and families) are without sufficient means to meet necessary costs of living. The GMI is complementary to other subsistence allowances, contributory or not, and is only one of the building blocks of the safety net in Latvia. At the same time the Latvia GMI scheme has numerous specific features of design, financing and implementation, which affect its targeting outcomes, coverage, and poverty impact.

2.1. Centralized design and regional variations

The Latvia GMI is centrally designed[5], which is the case in most of the EU Member States (see Annex 1) with the objective of providing material support to needy and low-income families (persons) in a crisis situation in order to satisfy their basic needs and promote the participation of able-bodied persons in the improvement of their situation. The GMI social transfer scheme is linked to the other pillars of the European social inclusion model: promotion of employability, and access

[5] Law on Social Services and Social Assistance, 12 December 2002 as amended

to quality social services. Compared to other GMI schemes, the Latvia GMI puts more emphasis on the linkage of cash transfers to employment services and to the mobilization of own efforts before applicants enter the GMI scheme. At the same time the support mechanisms for GMI recipients in terms of access to social services can be assessed as insufficient (Lace, 2009) due to the presence of very few instruments for linking minimum income support with social and health care services. This situation changed over the crisis when for the first time centrally-operated health care safety net was put in place in late 2009 to ensure access to health care, including pharmaceuticals, for the needy.

Municipalities have discretion in GMI design. Compared to similar schemes in other European countries, the Latvia GMI gives more discretion to municipalities in the field of benefit design. The state sets only a 'minimum standard' for GMI eligibility and adequacy. Municipal authorities have discretion to decide to grant higher GMI benefit levels, but not higher than LVL90. Until the end of 2010, the 'cap' on the GMI benefit was set at 50 percent of the minimum wage. Since the beginning of 2011, the municipalities can provide higher GMI which is not anymore dependent on the minimum wage. Instead they use as benchmark the monetary income determining the needy level, which is currently LVL90. The amount of GMI can be differentiated according to the household composition, or according to other criteria (for other groups). Municipalities pay a supplement to the GMI to households with one adult who has minor dependents. They can also set additional own conditions for benefit receipt, or decide on the possibility of in-kind provision of certain part of the GMI. Compared to other countries, possibilities for in-kind GMI support seem wider in Latvia: the initiative for that can come from the GMI recipient (if he/she files a written request for in-kind GMI with the respective CSW) or can be initiated by the municipal centers for social work if social workers find out that the GMI is not spent on meeting basic household needs.

The discretionary power of municipalities however depends on their social policy priorities and financial possibilities to implement them. In terms of priorities, the mix of municipal programs includes along with the GMI, also housing allowance which is means tested and designed, financed and implemented entirely by the municipal authorities; as well as municipal cash support in case of extraordinary circumstances which is not means tested. The municipally-financed benefits, and particularly the housing allowance, prevail in the total municipal social assistance spending and reach a higher number of beneficiaries. In January 2013, municipalities have spent LVL3.88 million on social aid benefits, out of which LVL928 000 (23.9 percent) was for GMI transfers against LVL1.7 million of spending on the housing allowance (43.7 percent). Though GMI constitutes a relatively low share of overall spending, it has increased significantly with time. In 2006, Latvian municipalities allocated to GMI only 13 percent of their overall social assistance budget. The same trend applies to the housing allowance, whose share in total spending used to be just below 32 percent in 2006. Higher spending is primarily driven by the increase in the maximum per capita benefit amount which actually was the result of the introduction of state co-funding, Eventually the higher spending's determinant was the state co-funding; the proportion of funds paid by municipalities for other benefits and the GMI and housing before and during crises, display noticeable differences.

2.2. Decentralized financing and consequences for equity

The Latvia GMI is designed centrally but the implementation and financing are delegated to the municipalities. As a rule GMI financing comes fully from the municipal budgets; there was a departure from this during the crisis from 2009 (October) until end-2012, when the program received state budget co-financing, which was withdrawn in 2013. In contrast, European GMI programs (13) are predominantly financed by central government budgets and in eight EU Member States the financing is shared between the central and local government budgets. Very few GMI programs are fully financed by municipal budgets, Latvia being among them[6] (see Annex 1).

The GMI financing arrangements affect overall spending and program size. Latvia is among the lowest spenders on last-resort social assistance in the EU. In 2009, only 2.3 percent of GDP was spent on non-contributory social benefits and services, including 0.23 percent of GDP on poverty-targeted programs (GMI and housing allowance). Even after the recent expansion, expenditure on the GMI remained small compared to other EU countries (0.16 percent of GDP in 2011). As of January 2013, municipalities allocate 23.9 percent (LVL928 000) of their total social assistance expenditure (LVL3.88 million) to GMI, which is significantly less than the allocation of housing allowance (43.7 percent) and social services and other benefits (32.4 percent).

Legally, there are wider possibilities for regional (municipal) variations in GMI financing in Latvia compared to other EU Member States. The state/central government sets only the minimum GMI levels that the municipalities are obliged to provide to eligible GMI claimants. Depending on their financial capacity, the municipalities can increase the GMI or opt for provision of additional benefits to their constituencies. Thus, despite that decentralized financing has advantages, which are outlined in Table 1, this model can become a major reason for inequality of treatment of claimants when municipalities have an unequal level of economic development, and subsequent divergence with respect to the tax base and financial abilities to support their vulnerable population. Financially weaker municipalities with less financing capacity for social assistance are usually also those who host a higher number of poor[7]. Table 2 illustrates the significant differences in the at-risk-of-poverty rate across the statistical regions of Latvia, and the even more significant gap in poverty rates between Riga and its neighborhoods, and the other parts of Latvia.

[6] Except for the crisis period when the municipal financing was supplemented by central budget financing.

[7] In this regard it is important to assess the role and impact of municipal equalization fund whose aim is to provide resources to those municipalities which have insufficient means to ensure their basic activities – and this applies also to social assistance.

Table 1: Strengths and Weaknesses of Centralized and Decentralized Financing

	Centralized Financing	Decentralized Financing
Strengths	* The state can ensure equal financing standards (same eligibility criteria, amounts of benefits and implementation rules) irrespective of the financial status of the municipality * State financing flows are based on legally binding 'state responsibility' that makes them more stable and predictable * The state has higher capacity for risk pooling * The state has better access to a wider range of financing sources (budget reallocations, tax increases, foreign grants and/or borrowing) * The state is better positioned to provide counter-cyclical financing for the safety nets, and for last resort social assistance (LRSA) in particular * The state is better positioned to protect spending on LRSA at times of economic downturns and to reallocate funds for LRSA from other budget categories	* Better accounting of local needs / local government level discretion * More flexibility in prioritizing benefits with change in needs and nature of vulnerability * Provides a link between beneficiaries and taxpayers
Weaknesses	* Limited knowledge of local needs and priorities * National eligibility criteria and financing standards are more rigid; it takes more time to adapt to the changing demand * Local governments have no incentives to raise own revenues for LRSA	* Less scope for countercyclical financing which becomes even more problematic at the times of crises and economic downturns * Local government spending may be less and less secure because of lesser stability of municipal revenues * Interregional disparities in coverage * Higher risks of cutting benefits in poorer municipalities despite that their population is most in need / less scope for risk pooling * Risks of 'benefit-driven migration' across municipalities

Source: Author, based on discussions with Ministries and CSWs in selected EU and Balkan countries, also Grosh et al (2008)

Table 2: At-risk-of-poverty Rate in Regions of Latvia, 2007-2010

(in percent of regional population)

	2007	2008	2009	2010
Riga	15.7	16.2	13.6	12.3
Pieriga	19.7	17.2	15.5	15.5
Vidzeme	31.6	38.1	24.8	23.9
Kurzeme	33.6	30.7	22.7	21.0
Zemgale	24.8	25.6	28.4	23.3
Latgale	42.1	42.2	34.7	30.4

Source: Central Bureau of Statistics Latvia.
Note: These regions are statistical regions, not administrative ones. The four statistical regions Kurzeme, Latgale, Vidzeme and Zemgale align with the planning regions of Latvia, quoted after World Bank 2013a

2.3. Eligibility for GMI, benefit amounts and adequacy

Principles for determination of GMI eligibility thresholds

The GMI eligibility is not directly linked to an objective minimum income or consumption standard of a poverty line, and bears no obligation to guarantee a minimum level of income or subsistence, or to increase GMI along with wage or cost of living increase. The GMI eligibility is determined through a multi-stage process.

- The GMI is eligibility threshold is determined annually by the Cabinet of Ministers as a nominal per capita amount.[8] The Cabinet of Ministers reviews and determines the GMI in connection with the financing possibilities of the respective draft annual State Budget. There is a two-step eligibility determination process: (a) identification of those in 'needy' status and (b) identification of GMI-eligible among the needy**.** Both needy and GMI-eligible are identified with a means (income and asset) test, where the income test is leading. The needy are not necessarily eligible for means-tested social assistance, however the confirmation of needy status is the first step towards verifying eligibility for GMI, or housing allowance. Those with needy status are also entitled to preferences in accessing various services and goods for needy persons and persons with low incomes. In January 2013, in Latvia there were 108 661 individuals with needy status and 38746 GMI beneficiaries; in February 2013 – 107 522 needy; and 38 153 GMI recipients.

[8] The eligibility threshold is also the maximum benefit amount due to individuals or units of assistance with no income. According to the GMI benefit formula, the GMI due is the difference between the maximum possible amount due and the actual income of the individual or unit of assistance

- By applying the criteria for 'needy' the municipalities determine a 'stock' of vulnerable people who are in need of support with cash transfers or services. As mentioned, previously the per capita income threshold for identification of 'needy' was linked to the minimum wage; it was set at 50 percent of the minimum wage, and in 2005-2011, persons whose income was 50 percent of the minimum wage or less, ranging from LVL40 (2005) to LVL90 (2011) were defined as needy. This relation was subsequently —strictly speaking—broken. For example, in 2012, the minimum wage was increased to LVL200 per month, while the income threshold for needy status remained unchanged thus identifying as needy those with an income which was 45 percent of the annual minimum wage or less. In addition to 'needy', there exists a second income criterion for determining another 'stock' of persons with low income (higher than the maximum income that determines the needy status or at the same amount of LVL90). They are also eligible for certain municipal services and benefits.

The GMI reaches only a fraction of the needy. Income thresholds for GMI-eligibility are set well below the threshold defining 'needy' status varying between 53.3 percent (in 2006) and 33.8 percent of the needy threshold over 2005-2008. In 2009, the income threshold rose initially to 41.1 percent and then to 44.4 percent for adults and to 50 percent for children. In 2013, the needy threshold remains unchanged while the GMI eligibility threshold goes down to LVL35, or just below 39 percent of the needy threshold. This confirms the categorization of the Latvia GMI scheme as a scheme for provision of assistance of last resort that is only complementary to other sources of income for the family or individual and is not aimed at guaranteeing sufficient means due to its rather restrictive eligibility criteria and low coverage of those who cannot support themselves on their own. Its variation confirms that there is no specific methodology or formula according to which the GMI eligibility threshold and benefit level relates to the income threshold for 'needy', or to any other minimum income or minimum resources standard, or a reference poverty line.

Latvia's subsistence minimum indicator is not used in the formula for defining GMI or needy status. Latvia calculates average monthly subsistence minimum using a basket of goods and services. In January 2012, for one person it was calculated at approximately LVL173 (approximately EUR247), income tax and social insurance contributions excluded. This subsistence minimum indicator is not related to the income indicators that define needy status or the eligibility threshold for GMI.[9] Ultimately both the access threshold for GMI and the maximum amount of GMI are set as nominal amounts which are arrived at after negotiation between the Cabinet of Ministers—as the central government designs the program—and the Latvian Association of Local and Regional Governments representing the municipalities which implement and finance it. The negotiation outcomes are not necessarily driven by objectives for guaranteeing a certain minimum level of consumption and preventing its erosion with inflation given that there is no rule that links the GMI level with a poverty line of a guaranteed minimum living standard.

[9] Moreover, the Law on Social Services and Social Assistance makes no legal linkages between them, there are references to the term 'needy' however there is no legal definition or reference to a legal definition in another piece of legislation.

The discretionary approach to defining the eligibility thresholds for GMI schemes is not uncommon for the EU Member States, although it is not the prevalent practice. Along with Latvia, other countries with small and restrictive last-resort schemes, such as Bulgaria and Poland, are applying this approach since it provides for no binding obligation to increase the minimum income level with the increase of cost of living or wage growth, and to preserve the real value and purchasing power of the benefit. With such an approach, the size of the program is fully determined by the available budget. However, countries with comprehensive and encompassing social protection like the France, UK and Ireland, apply a discretionary approach as well. The prevalent approach is to set GMI eligibility thresholds and benefit bases by linking them to a national indicator of minimum subsistence level; 11 EU Member States apply it, including the Czech Republic, Slovakia, Slovenia, Romania, Estonia, Germany, Austria. Other countries apply policies where the GMI is linked to the minimum wage (the Netherlands), the old-age pension (Hungary) or the unemployment benefit (Denmark).

Absence of indexation rules

There are no explicit rules for updating the GMI eligibility thresholds and benefit amounts and this undermines benefit adequacy and sustaining ability to reduce poverty. Because of the absence of a link of the GMI to any objective income or subsistence standard, there are also no implicit rules for 'automatic' adjustment. This provides uncertainty with respect to preserving the access to GMI and could reduce its coverage with time. Uncertainty also exists with respect to protecting the real value and purchasing power of the benefit. Most of the EU Member states mitigate these risks and uncertainties by setting up indexation rules for the GMI eligibility thresholds (and maximum GMI amounts due, respectively) in different ways. Except for Latvia, only three other EU Member States (Ireland, Estonia and Bulgaria) have no rules. The rest of the countries are legally bound to apply indexation rules which vary in terms of methodology but pursue the same objective—curbing the erosion of real value of benefit amounts and eligibility thresholds caused by price growth. The different approaches range from indexation of the benefit base to which the benefits and income thresholds are linked, e.g. different kinds of minimum income standards, to direct indexation of the latter. Indexation can be based on one or a combination of indicators like national poverty lines, estimated with household budget survey data, growth of wages or pensions, as well as consumer price growth (see Annex 2).

Absence of equivalence scales

The Latvia GMI program does not use equivalence scales and thus departs from common international practice and economic logic, and gives disproportionately low benefits to small households. Explicit or implicit equivalence scales are applied in other EU Member States with respect to the setting of the eligibility thresholds or for the determination of benefit levels. In Latvia, there is no variation in GMI levels set for the first and following members of the unit of assistance. There is also no variation in case of adults or children, except for a limited period of time over 2010-12 when the benefit per child was set at a higher level than the benefit per adult. The variations in actual GMI amounts due come only from the household size. Without equivalence scales the GMI

computation does not take into account that when several individuals live together they also share resources and there are economies of scale. The maximum benefit amount due is determined on a per capita basis, with no variations with family size and composition thus assuming no economies of scales from living together and sharing resources. Decisions in the EU on whether to apply equivalence scales or not, and how to construct them vary.[10] Most of the EU Member States define the GMI or other last-resort social assistance amounts with equivalence scales (Annex 2). Apart from Latvia, only Poland's GMI scheme is designed without equivalence scales. Romania, Finland and Lithuania apply explicit equivalence scales while the majority of countries apply implicit scales—nominal amounts which vary with family size and composition (adults and children). In some cases equivalence scales are more detailed taking into account difference in age of children or adults, single parent families, presence of disabled family members, etc. The absence of equivalence scales can be justified for benefits that are entirely aimed at securing personal food and non-food needs. When this is not the case, single recipients and small units of assistance are at disadvantage, since they are supported to a lesser extent. They cannot take advantage or can take less advantage from common use of housing, vehicle, appliances, furniture, and from sharing of utility costs.

Assessment of income and assets (material resources)

A rather comprehensive income test is combined with a relatively light asset test which allows to correctly identify those who are short of income in the current moment, but is less effective in identifying chronic poor who are deprived from both incomes and assets and need assistance more and for longer periods of time. The GMI is provided on the basis of an evaluation of the material resources (incomes and assets) of a household or of a person living separately. Means tests are quite similar in the EU Member States, the main difference being in the scope of incomes and assets that are taken into account. The income test for the Latvia GMI is encompassing. All the main types of income of the person and his/her household members are taken into account. The income texts requires verification of incomes from paid work and other economic activity, pensions (including supplementary payment to pensions) many state social benefits, grants, compensations, author's fees and royalties, lease (rent) and alienation of movable and immovable property (during the last 12 months), gifts, estates, dividends and prizes, material support for the family provided by a spouse or a parent of the child living separately. Over 2011-12, the Latvian Ministry of Welfare introduced changes to the scope of incomes which are counted for the purposes of GMI eligibility and the incomes which are disregarded.[11] Compared to 2011, in 2012 the income test allows less disregards and accounts for a larger number of state benefits, particularly the child care benefit, the child care benefit supplement and the full parental benefit. Many EU

[10] The OECD applies two scales: 'standard' where the income of the second and each next adult in the unit of assistance is 70% of the income of the first adult, and the income of each child is 50% of the income of the first adult, and 'advanced / accelerated' equivalence scale where the income of the second and each nets adult in the unit of assistance is 50% of the income of the first adult, and the income of each child is 30% of the income of the first adult.

[11] Types of income that are not taken into account in the means test and for the calculation of the amount of GMI benefit: Childbirth Allowance, Disabled child raising allowance , Supplement to the State family benefit for disabled child, Benefit to a disabled person requiring special care, Mobility Support, Funeral Benefit, Support for children who have not been declared disabled suffering from coeliac disease; Benefit for the visually impaired persons to pay for assistant services

Member States allow overlap of last-resort social transfers and child benefits in an effort to strengthen the support for families with children, which tend to be at a higher risk of being poor. Since the child poverty rate in Latvia emerges as one of the highest within the EU, options should be considered for full or partial disregarding of the state benefits for families with many children or families which fall within the category of 'needy' but have income (with state benefits) that exceeds the GMI eligibility threshold.

With time, the income test in Latvia is becoming even more comprehensive and encompassing while the asset test remains less encompassing. This is the case especially after widening the scope of social insurance and state benefits that count as income. At the same time the income eligibility threshold for GMI has been lowered: it was noted already that in 2013 the income threshold for access to GMI is LVL35 for a single person, down from LVL40 for an adult and LVL45 for a child in 2010-2011. This will result in further limiting the access to GMI for those who need it to meet their basic needs. The asset test is less encompassing in terms of the scope of a person's or household's acquisitions that are taken into consideration when determining GMI entitlement. It takes into account real estate, movable property and savings, but also disregards certain assets.[12] Unlike in many other EU Member States, the primary legislation is not exhaustive with respect to specifying which assets are included in the means test. The treatment of assets is also not specified, i.e. whether their presence is used as an 'exclusionary filter' to deny receipt of GMI even if the applicant is eligible based on insufficient income. The design of the asset test is largely delegated to the municipalities which can decide on what types of property and assets are not to be taken into account, or partially taken into account in the means test. Local authorities set criteria for immobile property (except for the primary dwelling) such as ownership of land, woods, buildings, housing furniture as well as clothes and household objects which belong to the person (household) at the time of the claim, a car and/or another vehicle.

The gaps in the legal definition of the asset test and the large scope for municipal discretion in designing and changing it with administrative instructions could have significant impact on access to GMI and could undermine equality of treatment of claimants across municipalities. One drawback of such an approach is that eligibility criteria and their changes are less transparent and accessible by those who feel needy and consider applying for GMI. Also, a less transparent asset test can be applied with wider discretion and subjectivity at individual case level. Finally, if the asset test is not well defined it can be weak, and will not allow proper differentiation between those who are lacking only current income but are less asset poor (transient poor) from those who are deprived both from incomes and assets (chronic poor).

[12] Types of property and assets that are not taken into account in the means test include real property or a part thereof which is used as dwelling of the household, land, woods, buildings, housing furniture, clothes and household objects which belong to the person (household) at the time of the claim, a car and/or another vehicle.

3. Behavioral conditions for minimum income support

A recent trend in social assistance is to link receipt of minimum income support programs with changes in recipient's behavior, and/or behavioral changes in their unit of assistance (conditional cash transfers). Behavioral conditions are those which prize an active behavior or sanction passive behavior; positive behavioral conditions have the purpose of providing incentives for an active behavior while negative behavioral condition have the purpose of sanctioning passive behavior. Conditions are usually attached to child benefits, unemployment or income transfers. Most OECD and EU countries attach labor market participation conditions to social assistance which are considerably stronger, more binding and more strictly enforced in the 'old' EU Member States compared to the newer members of the EU. Annex 4 presents behavioral conditions related to activation in selected OECD and EU countries. Work related conditions emerged in Europe in the 1930s. In the 2000s, and especially at the time of the crisis and in the post-crisis period, new instruments of active social policy were introduced, especially to influence the behavior of beneficiaries of minimum income support (Box 1).

Box 1: Active Social Policy

Social assistance can play more significant role in combatting poverty and social exclusion among prime-aged persons if social policies become more active in terms of helping working age benefit recipients overcome the obstacles to entering into paid work. Active social policies combine early and tailored interventions, greater focus on integration services, mutual obligations on both clients and providers to cooperate in the activation process, and reforms of benefit systems to remove disincentives to work. In many OECD countries substantial progress has been achieved in promoting active social policies by putting employment integration at the heart of social policy however these policies are not a silver bullet. Not everyone can be expected to participate in the labor market, and getting people into jobs will be insufficient to avoid exclusion if people do not keep the jobs, if the wages the jobs pay are not high enough to escape poverty, or if they offer little prospects for skills development and career progression. Hence, policies aimed at integration into employment must be complemented by measures to "make- work-pay" and to assure adequate income for those for whom integration or re-integration into the labor market is more difficult to achieve.

A consensus is also emerging in a number of countries on applying an approach based on the principle of "mutual obligations" – that the commitment and effort society makes to assist beneficiaries requires that they in turn do their best to take steps to find work or engage in other productive activities. The pay-off of such policies in the future is higher income and self-sufficiency, as well as higher employment rates for the economy as a whole. Reaping these benefits requires promoting welfare-to-work reforms, starting welfare-in-work reforms, moving beyond work as the only focus of policies and strengthening the effectiveness of programs targeted to persons for whom work is less feasible.

The rationale for active social policy rests with the fact that prolonged lack of a job is a primary driver of social exclusion for prime-aged individuals. Its consequences are especially dire because many of these prime-aged persons have important family responsibilities. Research on 11 European countries in 1996 shows that unemployed persons are, on average, close to three times more likely to fall into poverty than the working-age population at large, and more than two times more likely to experience different forms of material deprivation. The likelihood of inactivity increases exponentially among groups exposed not just to joblessness but to multiple disadvantages, and when joblessness extends over prolonged periods of time.

Source: OECD (2005). Extending Opportunities: How Active Social Policy Can Benefit Us All. ISBN 92-64-00794-6.

The importance of promotion of active labor market behavior (activation) grows with the change of profile of GMI beneficiaries, particularly with the increase of share of those who are able to work, but are not employed, not in education and training and not looking for jobs. In Latvia, according to administrative data, since the introduction of the current GMI scheme in 2003, around half of the recipients are able to work, but most of them are unemployed and not looking for jobs. Around 32 to 35 percent of all GMI beneficiaries do not work, and up to 5 percent have child care obligations. The remaining 10-12 percent comprise the working poor whose wages are low and leave their families below the eligibility threshold for GMI assistance. The GMI is designed with both positive and negative behavioral conditionalities with which able-bodied recipients are required to comply. Compared to the majority of GMI schemes in the rest of the EU Member States, these conditions appear more numerous and stricter. Beneficiaries are 'treated' with both incentives and sanctions; they are obliged to co-operate with social workers in order to overcome the situation through provision of information, personal attendance, participation in measures promoting employment, acceptance of medical examination, participation in medical and social rehabilitation.

Latvia has already introduced certain positive behavioral conditions aimed at encouragement of job search and subsequent reduction of the period of stay on GMI benefit. Such conditions involve mandatory requirements for job search, acceptance of suitable jobs or offers for training and re-qualification, as well as co-participation in temporary public work programs. First and foremost, if able-bodied, applicants for GMI are obliged to register with the State Employment Agency. This is one of the GMI eligibility conditions. The unemployment registration is the primary mechanism for linking them to employment services at an early stage, preferably at application or shortly after they start receiving GMI benefit. This approach is common in all EU Member States. In the Employment Service, those who are most distant from the labor market are provided with employment services with priority (Lace 2009) despite that their 'treatment' requires more intensive and costly efforts. The able-bodied GMI recipients are obliged to comply with job search requirements, to look for work and to accept suitable jobs, and to participate in ALMPs and public works organized by the State Employment Agency.

The incentives for positive employment related behavioral changes are however considered weak in Latvia from at least three perspectives. First, the co-participation obligation is conceptualized as an indirect support instrument for promoting attachment to the labor market, motivating active job search and investment in skills for improved employability. However, a system has not been developed that co-participation conditions are coordinated not only with the social work specialist and the GMI recipient, but also with representatives of the State Employment Agency (Lace 2009). Second, in 2007-2013, the funding for ALMPs is declining notably, mostly due to reducing allocations from the European Social Fund. This affects the scope of programs that can be offered to job seekers, especially to those who are hard-to-employ due to long-term labor market detachment and multiple barriers to employment. In a situation of high unemployment, and limited financing for ALMPs, those who are the hardest to employ face higher competition and less prospects for enrolment in ALMPs. An increasing share of long-term unemployed, primarily GMI

recipients, participate in paid temporary public works which may have a negative net impact on their prospects to get a job on the primary labor market. Third, stronger financial incentives are needed to reinforce activation building on the experience of other EU and OECD countries.

Latvia can benefit from the already accumulated international experience in providing incentives for work which suggests different approaches and options for policy solutions. Many countries are moving towards adjusting the tax-benefit systems to 'make work pay'. They are also introducing gradual withdrawal of benefits after GMI beneficiaries start working to cushion the abrupt loss of income from benefits. For example, beneficiaries could continue receive the full benefit or a fraction of it for six or more months after taking a job. Similar effects are achieved when the threshold for exit from the GMI is set at a higher nominal level compared to the threshold for entry into the scheme. Countries are designing in-work benefits to reward independent job search and placement, as well as widening the scope of earned income disregards when assessing eligibility for social assistance to create incentives for taking work which is not yet the case in Latvia. Ireland for example applies a back-to-work allowance limited to three years and decreasing over time. In the UK, the long-term unemployed receive a one-time bonus when accepting a new job. France has introduced earning disregards which allows minimum income beneficiaries to continue receiving benefits while getting paid up to 750 hours per year (lasting max. 12 months). The Netherlands operates an internship program for young unemployed, providing a one-time remuneration of 450 euro for three months of internship, while recipients still receive unemployment benefit. A detailed account of practices in OECD and EU Member States is provided in Annex 3.

Latvia also applies certain sanctions for inactivity. They include reducing the total benefit to the unit of assistance (e.g. the household) by the amount due to the person who has refused to comply with the behavioral requirements, or setting time limits for the receipt of GMI. For example, in Slovenia GMI is provided to able to work benefit recipients for 9 months within one calendar year. In Latvia, prior to July 1, 2009, the benefit duration for the able bodied was also limited: potential beneficiaries had to apply every 3 months and up to 3 times within a calendar year, meaning that the total period of the payment of the GMI benefit could not exceed nine months in a calendar year. Amendments were made to the Law on Social Services and Social Assistance and since July 1, 2009 these restrictions were abolished.

Monthly administrative data on beneficiaries is used to investigate the degree of dependency on GMI. Using monthly administrative data from local governments on GMI and housing benefits, we look at trends in GMI benefits receipt. Due to data being available earlier for larger cities, we restrict the sample of municipalities to seven municipalities/cities covering benefit information for about 45 percent of the population from 2006 to 2012 (see Box 2 for a discussion of the sample selection criteria). We then check for the later years whether a similar pattern is observed between the seven municipalities/cities and those municipalities not included in the earlier years of the database.

Box 2: Social Assistance Data and Sample Selection Criteria

The data was taken from a micro-level database on the receipt of GMI, housing benefits, and 'other benefits' for 109 Latvian municipalities and 9 cities. Kandava municipality is the only missing municipality as they use a different database to record information. Other benefits consist mainly of family benefits that are not means tested, such as maternity benefits, paternity benefits, parental and lone-parent benefits, child birth and child care benefits, family state benefits, state social security benefits, disabled child care, survivors' pensions, and funeral benefits. Other benefits also include disability benefits for other adult members of the household.

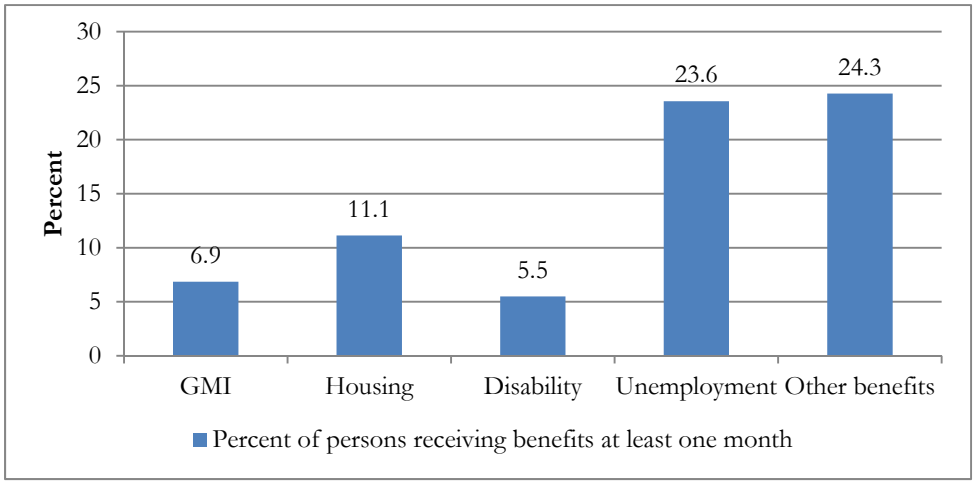
A common database system was rolled out in Latvian municipalities from 2005 at different times and we use data for the seven municipalities/cities for which we find that the data are sufficiently complete since the year 2006; the database implementation was completed at within different timeframes in municipalities, with small municipalities generally finishing later than Republican cities. The basis for this selection is a comparison of the statistics from the local government databases on benefits with the aggregate figures provided by the Ministry of Welfare. We do not use any data for the year 2005 because for this year we do not have any comparison data from the Ministry of Welfare. Our observation period is thus January 2006 to July 2012, i.e. 79 monthly waves.

The criterion we use for determining data quality is that the deviation of the number we calculate from official figures should be smaller than 20 percent. For Jurmala, Riga, and Valmiera, data quality is best and deviations are below 10 percent in all years; Ventspils and Liepaja have in some years deviations between 10-15 percent or 15-20 percent, respectively; there is a deviation of more than 20 percent in one single year for Preili municipality (2009) and Rezekne (2010), but we include these nonetheless. For most other municipalities, data of sufficient quality is only available for 2010 or 2011. Thus, our data covers about 45 percent of the total population.

The scope for possible GMI dependency in Latvia is seemingly not large because of the small size (coverage) of the program and the short time spent on benefit. Administrative data indicate that the GMI in Latvia is very small, the percentage of people receiving GMI for at least one month is smaller compared to the similar indicator for other benefits (Figure 2), which means that welfare dependence where existing would affect a very small group of people. In fact, no more than 4 percent of the population at any one time received GMI over the crisis (Figure 3). Two-thirds of GMI recipients receive it for less than 20 percent of the time (over a time period for which data has been analyzed, January 2006 to July 2012), and around 30 percent of GMI beneficiaries are on the benefit for only 5 percent of the total time covered by the data. People from Riga and poorer people tend to be more dependent on GMI. The number of spells per person is low, with 40 percent of recipients having only having received GMI once (Figure 4). Few GMI recipients spend more than six continuous months on benefits, with many getting no more than three months of GMI support in one spell (Figure 5).

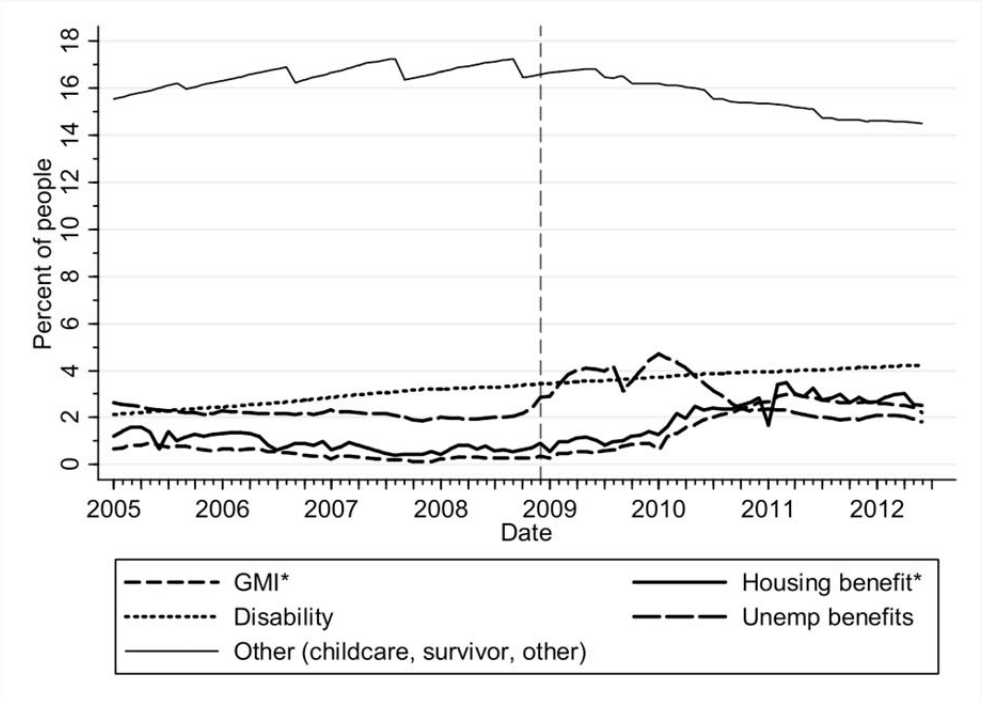
Figure 2: Share of People Receiving Different Benefits in Latvia for at Least One Month

(percent of population who received a benefit for at least one month in sample period)



Source: World Bank based on administrative data from the Ministry of Welfare.
Note: The data covers the period January 2006 to July 2012.

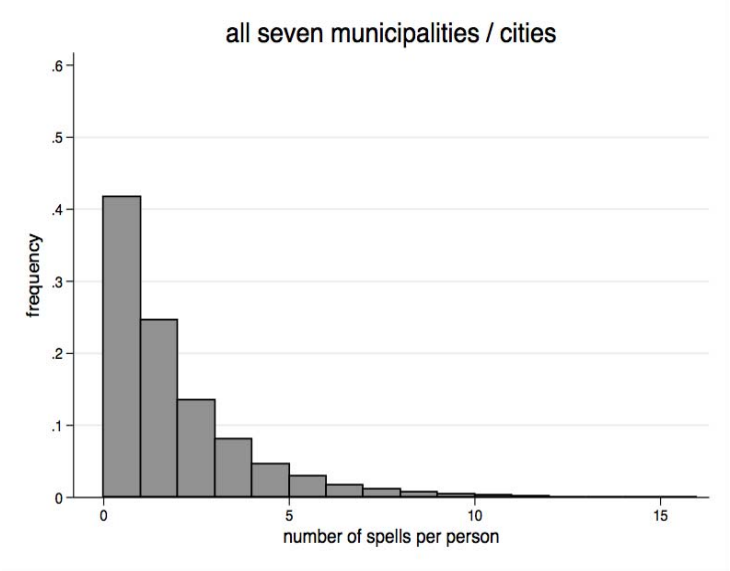
Figure 3: Benefit Program Incidence, 2005-2012



Source: World Bank calculations using data from the Ministry of Welfare, the State Employment Agency and local governments.
Notes: Other benefits consist mainly of family benefits that are not means tested, such as maternity benefits, paternity benefits, parental and lone-parent benefits, child birth and child care benefits, family state benefits, state social security benefits, disabled child care, survivors' pensions, and funeral benefits.

Figure 4: Number of GMI Spells Per Individual

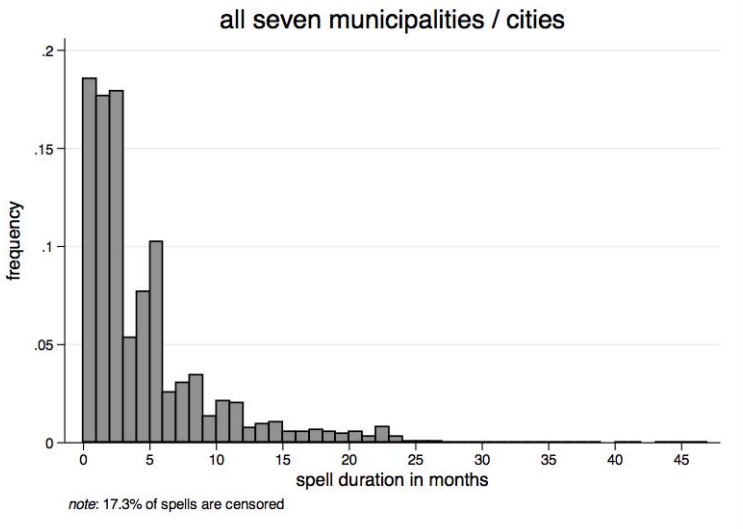
(number of separate time periods for which a person receives GMI)



Source: World Bank calculations using data from local governments.
Note: Every individual is allocated to the city where he has had most of his spells. The data covers the period January 2006 to July 2012.

Figure 5: Distribution of GMI Beneficiaries by Time Spent on GMI Benefit

(percent of recipients by number of months on GMI)

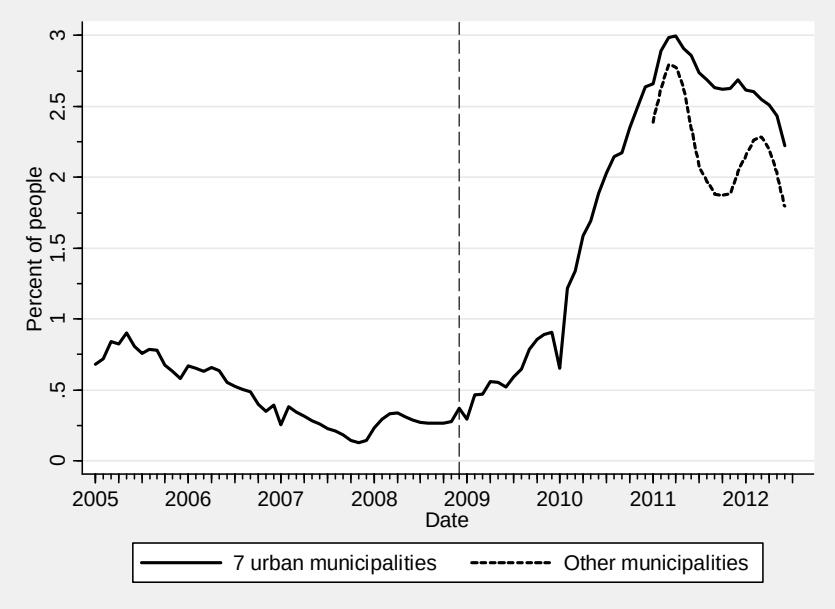


Source: World Bank calculations using data from local governments.
Note: The data covers the period January 2006 to July 2012.

Examining data for all municipalities from 2011, we see that trends in the share of people receiving GMI have been similar for the seven municipalities/cities analyzed above and the

excluded municipalities. Most of the municipalities other than the seven used in the analysis above started recording complete data on benefits from 2010 or 2011 (see Box 2). Looking at benefit receipt from 2011, the patterns of benefit receipt have been similar between the seven municipalities/cities and the other municipalities. Coverage of GMI and housing benefits are slightly lower in these other (mostly smaller) municipalities and GMI benefit amounts per beneficiary slightly higher in the seven municipalities/cities. Furthermore, the share of people receiving GMI outside these seven municipalities has followed a similar path to the seven municipalities/cities for which data is available for a longer time period (Figure 6). Namely, the share of people receiving GMI peaked around March 2011, declined in summer and fall of 2011, rose slightly again in late 2011, and fell in early 2012. The decline and subsequent recovery in 2011 was sharper outside the seven municipalities/cities, but other than that, the pattern was similar in both locations.

Figure 6: GMI Program Incidence: Comparison of Trends in Seven Municipalities/Cities and Other Municipalities



Source: World Bank calculations using data from local governments.

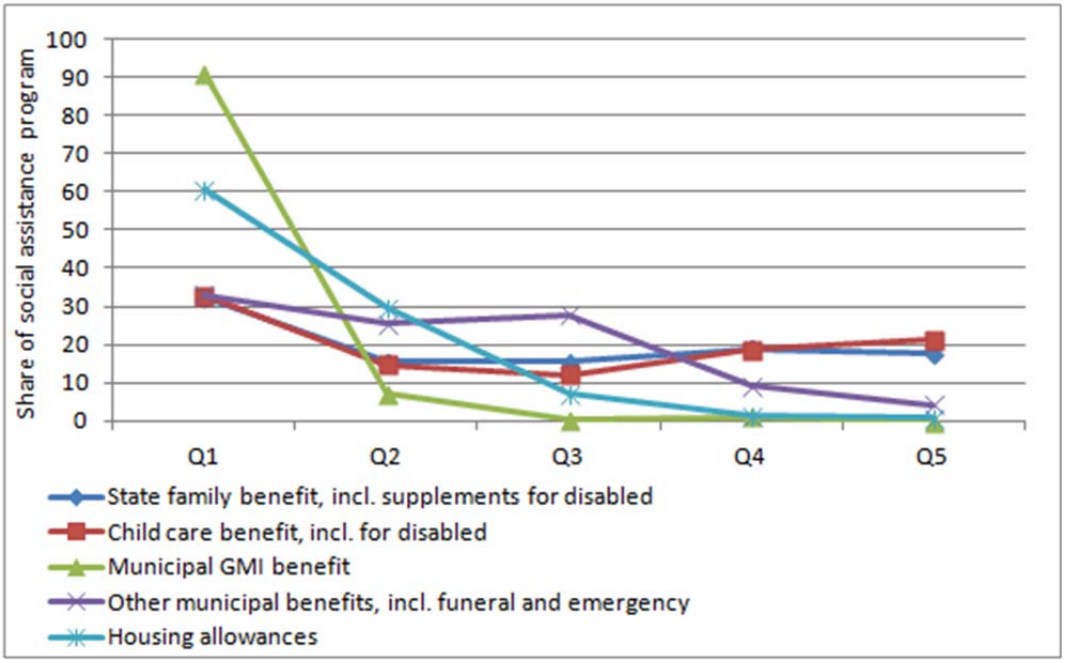
The behavioral conditions that promote job search and employment will be more effective if some of the 'generic' disincentives of the income and asset test are addressed. The design of the Latvia GMI 'suffers' from such inherent disincentives as much as any other guaranteed minimum income program that applies such tests. Identifying eligibility with a means test by its nature creates certain disincentives for recipient families to earn, save and invest in productive or household assets since this affects their eligibility for GMI, as well as the amounts they would receive. Another source of design disincentives is the GMI benefit formula which determines the due benefit as the difference of the maximum amount due to a certain unit of assistance and its actual income. This means that any additionally earned income will be fully taken away from the unit of assistance. The disincentives can be also associated with the benefit generosity. In principle,

standalone GMI is not generous (18 percent of the subsistence minimum in 2004 and 22.2 percent of the disposable income in the poorest quintile according to 2011 SILC survey) but if 'packaged' with other benefits, such as housing allowance and other municipal benefits, state benefits which are disregarded in the income test, social services and associated rights, might provoke disincentives to make the transition from social assistance to work.

4. GMI performance outcomes

GMI eligibility restrictions in Latvia translate into specific performance characteristics of the GMI scheme: a combination of good targeting accuracy, but low coverage and low benefits adequacy which restricts the benefit's poverty impact. Certain implementation arrangements, such as frequent re-certification of eligibility (every three months) also contribute to improving targeting accuracy. Figure 7 shows that the GMI is better targeted to the poor than the other means-tested benefit—the housing allowance; the main difference between them being in the institutional level of their design (central versus municipal).

Figure 7: Targeting Performance of the Main Social Assistance and State Benefits in Latvia, by quintile, 2010



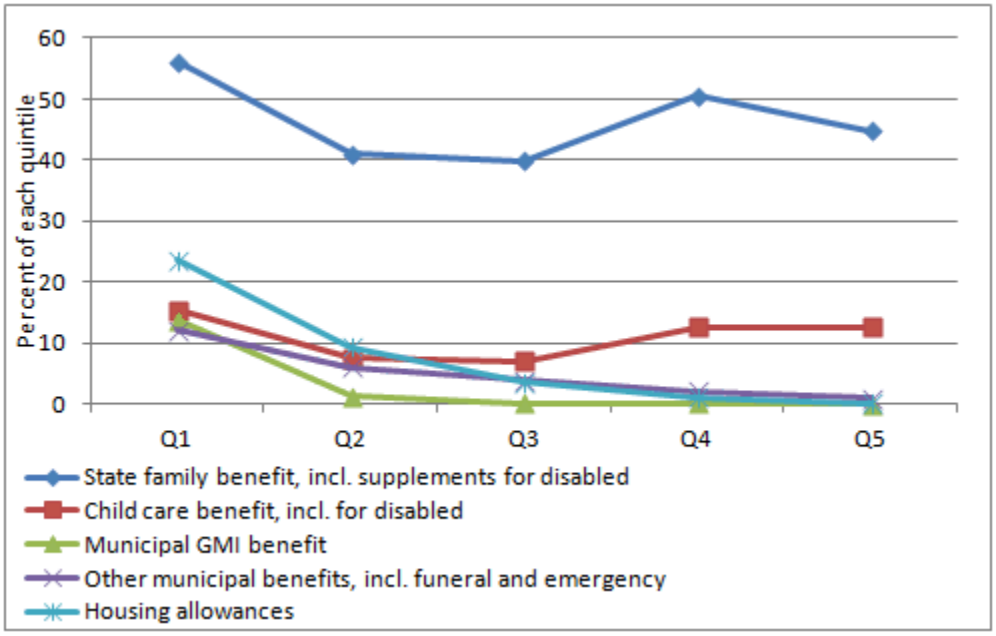
Source: Latvia SILC 2011. World Bank staff calculations.

The Latvia GMI is very well targeted to the poor. With a targeting accuracy of 90 percent (meaning that 90 percent of the total budget allocated for GMI in 2011, is transferred to individuals and families belonging to the poorest 20 percent of the Latvian population), the Latvia GMI ranks among the best targeted last-resort social assistance programs in the new EU Member States and Eastern Europe. Almost all allocation for GMI reaches units of assistance which belong to the poorer 40 percent of the population, while "leakage' of resources to the richest quintile is virtually

nonexistent. This very high targeting accuracy is in striking contrast with the distribution of the categorical state family and child care benefits in Latvia which could be even regressive in certain cases. Compared to the GMI, the housing allowance - also means-tested but with a decentralized eligibility determination, is less effective in reaching the poor. From design perspective, the main reason for accurate targeting relates to the very strict eligibility criteria, and especially to the low income threshold that qualifies for GMI. Other reason is the small benefit due (which is the difference between the low income threshold and the actual income of the applicant unit of assistance) combined with complicated application procedures which undermine the motivation for applying.

The Latvia GMI has low coverage. Eligibility restrictions also translate into low coverage which is also supported by administrative data, as stated earlier**.** According to SILC 2011 data, only 3 percent of all the population[13] and close to 14 percent of the poorest 20 percent of it receive GMI (Figure 8). This compares poorly to several programs in the Europe and Central Asia region which cover in the upwards of 40 percent of the poorest quintile.

Figure 8: Coverage of GMI and Other Municipal and State Benefits in Latvia, by quintile, in 2010



Source: Latvia SILC 2011. World Bank staff calculations.

[13] As already mentioned in the Executive Summary, this is consistent with administrative data showing that around 2 -3 percent of the population of Latvia is receiving GMI benefit. Nationwide, the number of GMI recipients started to decrease in 2011 and 2012**.** In early 2012 over 63 thousand people were accessing GMI (around 3 percent of the total population), but by the end of 2012 the beneficiary numbers had decreased to 41 thousand persons, or 2 percent of the total population

Eligibility restrictions translate into low generosity and low poverty reduction impact. The GMI program does not appear to provide adequate income support. It contributes little to incomes of its recipients; income support is only meaningful for those in the poorest quintile—22.2 percent of household disposable income of those in the poorest quintile comes from GMI. Comparing benefit levels to the 'at risk of poverty' line[14] also suggests that GMI beneficiaries in Latvia are significantly worse off compared to people receiving such benefits in most other EU countries.

The performance of GMI is not tracked consistently by the Ministry of Welfare with administrative, qualitative or household budget data which could be useful in terms of understanding how to adjust the design of GMI in order to improve targeting accuracy, coverage of the poor and welfare impact. Recently the UK Department of Work and Pensions is launching higher emphasis on control systems in social assistance, including audit or the means testing instrument. It may be worth investing in such information systems for ongoing evidence-based policy making. Details on this policy initiative are provided in Annex 5.

5. Conclusions and policy recommendations

The GMI benefit in Latvia offers very limited support to the poor. The review of the basic principles of GMI design suggests that Latvia is operating a limited in scope minimum income program. It is very narrowly targeted and has very low coverage which means that there is a large gap where people and families are with insufficient resources but not eligible for GMI and not 'captured' by the safety net. As such, the GMI benefit offers support to a very limited part of the poor. Some of its design features undermine its capacity to ensure resilience to shocks and crises, and to open opportunities for human capital building. Parametric GMI reforms can be implemented to reinforce its protection and promotion functions.

Policies should ensure equal access to benefits and equality of treatment of GMI beneficiaries across poorer and richer municipalities. This issue is exacerbated by the entirely municipal financing of the GMI which is burdensome for the poorer municipalities which logically experience higher financing needs and bigger difficulties in mobilizing local resources. Richer municipalities can increase the local GMI levels above the centrally set minimum standard while the poorer municipalities are at risk of not meeting even the minimum standard. The municipal equalization fund should earmark funds for meeting the minimum GMI financing standards. The benefit level setting should take into account not only the municipal ability to finance, but also the factors affecting GMI adequacy, and its role as a poverty alleviation instrument. Rules for update (e.g. indexation) can be introduced to guarantee a certain level of GMI purchasing power over time.

Policies should ensure that the poorest of the poor are reached with the GMI benefit. More detailed and repetitive audits of the GMI means test are needed. At this point, with SILC data it was

[14] The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers.

possible to understand that the majority of the benefit budget is allocated to the poorest 20 percent of the population, but it was not possible to go deeper and understand whether the GMI reached the relatively richer or the relatively poorer among the poorest quintile, e.g. the poorest 5 percent.

Policies should ensure that GMI does not encourage dependence on social assistance. Such dependence has proved to be detrimental for human capital development in the long run, affecting negatively the next generations. The GMI design analysis, as well as the analysis of the profile of GMI beneficiaries using administrative and household survey data, does not indicate existence of such dependence at this point. This does not preclude however using good practice examples from other countries that encourage earning and increasing incomes and assets which would eventually lead to leaving the social assistance scheme. Moreover, in the 2000s, many EU Member States move more 'aggressively' towards rewarding efforts to leave the safety net and take a job, using for example in-work benefits and broader income disregards.

Overall the Government's objective of most efficiently using of public funds for GMI can be met if the municipal and state benefits become better integrated into a system with common objectives, good coordination of design and implementation, along with common mechanisms and information systems for program tracking and evaluation.

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Annex 1. Guaranteed minimum resources programs in selected EU Member States: General program description and financing

(status as of July 1, 2012)

Country	Objective	Type of program	Level of design and implementation	Financing
Latvia	To ensure a minimum level of income for each member of needy households whose income level is lower than the level of income set by the Cabinet of Ministers	General non- contributory minimum /subsidiary safety net	The Guaranteed minimum income (GMI) level as well as eligibility conditions, formalities, calculation and payment procedures for the GMI benefit are set by central government. Benefits are organized and paid locally	The Guaranteed minimum income benefit is paid out by local municipalities and **from the municipal budgets**
Austria	To provide a decent life for people who are not able to cover their daily costs of living or those of their family members with their own resources.	Last-resort social assistance/ subsidiary safety net that complements own resources. Needs-oriented guaranteed minimum resources / general non-contributory system	Centralized design, managed on regional level by the district administrative authority and the municipalities	**Local** - primarily by lander (province) and social assistance associations, possibilities for refinancing from local communities
Belgium	Integration income which should ensure a minimum income to persons without sufficient resources and unable to procure them by personal effort or other means.	Last-resort social assistance/ subsidiary safety net that complements own resources	Benefits are established at federal level but granted locally by the Public Centers for Social Assistance	**Partial funding by the Federal State**, the Public Centers for Social Assistance and the municipalities in case of deficit
Bulgaria	To provide minimum income for people who do not have the necessary means to meet their basic needs	Specific non-contributory minima system/last-resort social assistance/subsidiary safety net	Designed and organized centrally; administered by Agency for Social Assistance and Centers for Social Work which are de-concentrated bodies of the Ministry of Labor and Social Policy	Central budget
Cyprus	Public assistance aimed to ensure socially acceptable living standard to categories of persons and families residing in Cyprus	Social welfare services	Central design	Central budget
Czech Republic	The fundamental goal is to ensure basic needs for living and housing. The principal condition is low income and impossibility to improve it by own effort (work, use of property and other priority claims)	Guaranteed minimum support benefit/general (uniform) system with specific conditions and obligations for different categories of people	Organized centrally; provided/paid through de-concentrated bodies - the Labor/Employment Offices	Financed from the Central budget (general taxation)

Country	Objective	Type of program	Level of design and implementation	Financing
Denmark	Activation measures and social assistance aimed at supporting people with insufficient means to meet her/his requirements and the requirements of her/his family	Guaranteed minimum support for non-able to work, including with disability; activation for able-bodied	The social assistance and activation measures are designed centrally and executed by the municipalities	**Combined central and local** - 50% state and 50% municipalities
Estonia	The fundamental aim of the scheme is to guarantee that after paying for housing expenses (within established limits) families or single persons still have means equivalent to the amount of the subsistence level	Specific non-contributory minima system / last-resort social assistance / subsidiary safety net	The benefit is centrally designed and the Parliament establishes the minimum subsistence level yearly. Benefits are delivered by the local governments	Central budget, financed from general taxes
Finland	The goal of the benefit is to ensure at least the minimum subsistence for the person or family	Specific non-contributory minima. Last-resort social assistance scheme / subsidiary safety net	Centrally designed and paid by the municipality in the area of which the person (family) resides	Financed by **local authorities**
France	To ensure a minimum income for persons without resources, to promote professional activity whilst fighting against exclusion guarantee a minimum income for persons capable of working	General or specific non-contributory minima. Last-resort social assistance scheme / subsidiary safety net	Designed and set at national level.	Central budget
Germany	Social assistance - tax-financed scheme of means-tested minimum resources to secure a material and socio-cultural subsistence level for beneficiaries who are capable or incapable of working and who do not earn a sufficient income in order to meet the needs of the domestic unit or who do not receive the necessary support from other people	Specific non-contributory minima for pensioners, working-age (capable and not capable to work) and jobseekers	Designed centrally, administered by the local authorities	Central budget financing for the benefit for those who are able to work, tax financed (for certain categories) and local budget financed (for other categories)
Hungary	To ensure a minimum standard of living for those persons of active age who are not employed; to ensure a minimum standard of living for persons in old-age	Specific non-contributory minima / subsidiary safety net for the regular social allowance and fixed amount for the unemployment	Both benefits are centrally designed and administered by the local authorities	**Central budget with limited co-financing by local authorities** - the benefits are financed for 80-95% from the central budget and for 20-5% from the local governments' budget

Country	Objective	Type of program	Level of design and implementation	Financing
Ireland	To ensure minimum resources	General non-contributory minimum - Supplementary Welfare Allowance provides differential flat-rate cash benefits for persons whose means are insufficient to meet their needs. Specific non-contributory minima: A range of contingency related non-contributory schemes are available to persons with limited means	All schemes are organized and implemented at state level	Central budget
Italy	Cash or in-kind support to guarantee availability of minimum resources as defined by local criteria	Last-resort social assistance and services – in-kind support means intervention by social workers	Legislative functions (program design) and administration of benefits for the poor are transferred to the regions (Article 132 of Law No. 112 of 1998). Some of these competences are delegated to municipalities and local entities. Every municipality, acting in accordance with regional legislation and depending on the available budgetary resources, implements its own policies of social intervention on its territory	**Combined financing –** by the central budget and local authorities
Lithuania	Cash social assistance is provided to families and single residents unable to provide themselves with sufficient resources for living It comprises both Social Benefit and Reimbursement for the Cost of House Heating, Hot Water and Drinking Water	Last-resort social assistance / subsidiary safety net	Centrally designed and paid by municipalities from targeted subsidies allocated to them from the national budget (on a pilot basis, five municipalities pay cash social assistance from their budgets	Centrally financed; on a pilot basis, five municipalities pay cash social assistance from their budgets
Nether-lands	To provide financial assistance to every citizen resident in the Netherlands who cannot provide for the necessary costs of supporting himself or his family, or cannot do so adequately, or who is threatened with such a situation	Last-resort social assistance	National norms are established. In addition, local municipalities can provide other allowances	Central budget
Poland	The aim is to enable people and families to deal with problems which they are not able to overcome with their own resources	Last-resort social assistance / subsidiary safety net	Benefits are centrally designed and organized by units of central and local administration in cooperation with organizations such as foundations, associations, the Catholic Church, other churches, religious groups, trade unions,	Central budget

			employers and natural and legal persons	
Country	**Objective**	**Type of program**	**Level of design and implementation**	**Financing**
Portugal	Universal scheme for all residents who are in a situation of socio-economic deficiency aiming at ensuring that individuals and their family have sufficient resources to cover their basic needs, while promoting their gradual social and professional integration	Specific non-contributory minima / subsidiary safety net	Centrally designed	Central budget
Romania	Social Aid, Heating Energy Allowance, Natural Gas Allowance and Solid Fuel or Oil Allowance The Social Aid is aimed at covering the basic needs by guaranteeing a minimum level of income, according to the solidarity principle		Central government-controlled social assistance scheme	Financed by the central budget, administrative cost is covered partly by the local budgets
Slovakia	To ensure a minimum income for those unable to maintain their basic living conditions	Universal non-contributory tax-financed scheme / subsidiary safety net	Organized centrally, and delivered through integrated Employment and Social assistance offices which are de-concentrated units of the Ministry of labor, Social Assistance and Family	Central budget
Slovenia	To help secure minimum level of material security, for reasons beyond their control; to provide funds to meet the minimum needs at a level which allows the basic subsistence	Specific non-contributory scheme	Centrally designed and administered locally; granted by Social Work Centers	Central budget
Spain	No nation-wide program for minimum income guarantee; regional programs aiming at minimum income support differentiated by type of vulnerability and risk	No general non-contributory minimum. Specific non-contributory minima	Regionally organized (disability and old age). Centrally organized (unemployment assistance)	**Local** - financed by autonomous communities, for state of material need. **Central budget**- non-contributory benefits for persons in pre-determined situations of need
Sweden	The assistance is given when a person (or a family) is temporarily (for a shorter or longer period) without sufficient means to meet the necessary costs of living	Social assistance is a form of last resort assistance	Social assistance is organized locally	Social assistance financing is **decentralized – financed by municipalities**
United Kingdom	Income support for people who are not in full-time work, or not obliged to register as unemployed, and whose income is below a minimum level	Last-resort social assistance for the stated groups	Centrally designed and implemented	Central budget

Source: MISSOC Database, February 2013

Annex 2. Guaranteed minimum resources programs: main design characteristics in selected EU Member States

(status as of July 1, 2012)

Country	Principles for determination of GMI benefit amounts	Benefit base	Impact of family composition	Indexation rules	Variation with benefit duration
Latvia	Nominal amounts determined annually by the Cabinet of Ministers	No	No variation depending on family composition; benefit is per capita, except for a limited period of time in 2010-12 when the benefit per child was set at a higher level than the benefit per adult. Adult – LAT 37; Child – LAT40	The Cabinet of Ministers adjusts the amount according to the possibilities of the annual budget in annual negotiations with the Latvian Association of Local and Regional Governments	Unlimited duration, no variation with time. Prior to 1st July 2009, the total period of GMI payment could not exceed 9 months in a calendar year; abolished 1st July 2009
Austria	The benefit is linked to minimum standards (compensation supplement) that are fixed for food, clothes, personal hygiene, household items, heating and electricity as well as needs for participation in social life	Subsistence minimum	Differentiated minimum standards for single persons and single parents, spouses and cohabiting partners, and minor children, assuming economies of scales from cohabitation	Annual adjustment with the increase in compensation supplement	Unlimited, renewable
Belgium	Nominal amounts – differentiated	Subsistence minimum	Implicit economies of scales are assumed when determining the amount for cohabiting partners. Combination with child and family benefits is allowed	Automatic adjustment any time when the consumer price index varies by 2%	Unlimited, renewable
Bulgaria	Government decision on differentiated minima depending on age (child or adult), employment status, disability, school attendance and income status. The benefit base is the guaranteed minimum income (GMI) of BGN 65 (€33)	No, set with annual budget acts	Implicit equivalence scales arrived at through the differentiated coefficients. The amount of the differentiated minimum income is lower if the claimant lives with other person(s) of working age; the amount of the differentiated minimum income is higher for persons living alone, single parents and for parents who take care of a child with disability	No specific indexation rules for the GMI. The differentiated minima can change with adjustments of coefficients	Unlimited benefit duration, no variation with time

Country	Principles for determination of GMI benefit amounts	Benefit base	Impact of family composition	Indexation rules	Variation with benefit duration
Cyprus	The basic allowance is defined as nominal amount with differentiation for dependent family members based on age	Subsistence minimum	Implicit equivalence scales: 0.5 increase of the nominal benefit for every dependent person over 14 years of age; 0.25 increase for every dependent person under 14 years of age	Adjustments based on the yearly consumer price index	Unlimited, renewable
Czech Republic	Nominal and differentiated amounts set by law - monthly amounts of System of Assistance in Material Need benefits are determined based on the monthly amount of Subsistence minimum CZK2200 (€85)	Living minimum and Subsistence minimum defined by law	Implicit equivalence scales: €133 for single person; €122 for the first person in a household; €110 for the second and other persons who are not a dependent child; €68 per child under 6 years; €83 per child of 6 - 15 years; €95 per child 15 - 26 years old	Government rises annually the Living minimum and Subsistence minimum if CPI growth for sustenance and personal needs exceeds 5%; indexation can be more frequent in case of extraordinary circumstances	Unlimited, renewable
Denmark	Social assistance - monthly amounts with possible supplements for family support, housing, participation in activation or individual training	80% of the unemployment benefit	Implicit equivalence scales. Basic amount for single persons of 25 years or more: €1,390; basic amount for a person with at least one child: €1,847. Amount for persons under 25 years, who do not provide for their child/ children in their home (a) living with one or both parents: €432, (b) living separately: €896	Adjustment once a year according to the adjustment rate	For persons under 25 years receiving assistance since 6 continuous months, the assistance will be reduced
Estonia	Subsistence benefit is linked to subsistence level set on the basis of minimum expenses for food, clothing, footwear and other goods and services which satisfy primary needs	Minimum consumer basket set with government decision	Implicit equivalence scales. Single person or first person in the household: €76.70 in 2012. Each following household member (including child(ren): €61.36	No automatic adjustment	No maximum duration; renewed monthly
Finland	Nominal amount - basic social assistance benefit for the first adult and equivalence scales	By law	Explicit equivalence scales: single person €461.05 and single parent €507.16 per month; additional 85% for other persons at least 18 years of age; 73% for child 18 years or older; 70% for each child 10 to 17 years old; 63% for child under the age of 10	Adjustment once a year in accordance with the index of national pensions	Unlimited, renewable

Country	Principles for determination of GMI benefit amounts	Benefit base	Impact of family composition	Indexation rules	Variation with benefit duration
France	Nominal amount - Active solidarity income	By government decision	Implicit equivalence scales - single person: €474.93; single-parent family with 1 child: €813.16; couple with 2 children: €997.35; couple with 3 children: €1,187.32	Annual adjustment with consumer prices growth, tobacco excluded	Unlimited; renewal every 3 months
Germany	Nominal amounts. The ceiling is determined with a sample survey of income and consumption, and based on the actual expenditure of households in the lower income range (the lower 15% for normal requirements of adults and the lower 20% for normal requirements of children	Subsistence minimum	Implicit equivalence scales: €374 for persons living alone or for single parents; €219 for children under the age of 6; €251 for children aged between 6 and 14; €287 for children from the age of 14 and above	Annual adjustment with the growth of average wages and average prices of goods and services	Unlimited, renewable
Hungary	Nominal amounts for the regular social allowance; the income of the family is supplemented to 90% of the minimum old-age pension	90% of minimum old-age pension	Implicit equivalence scales: income is supplemented to 80% of the minimum old-age pension in case of an old-aged person with a spouse; to 95% of the minimum old-age pension in case of one-person households below 75 years of age; to 130% of the minimum old-age pension in case of one-person households above 75 years of age	The amounts of the benefits depend on the minimum old-age pension which is usually revised yearly, however, in 2011-2012 the amount of the minimum old-age pension was not revised. The adjustment belongs to the competency of the government	Unlimited, renewable
Ireland	Nominal monthly rates for the Supplementary Welfare Allowance	By government decision	Implicit equivalence scales. Single person: €806; couple without children €1,347; couple with one child: €1,476; couple with 2 children: €1,605; couple with 3 children: €1,734; single parent family with one child: €935; with two children: €1,064	No automatic adjustment	Unlimited, renewable

Country	Principles for determination of GMI benefit amounts	Benefit base	Impact of family composition	Indexation rules	Variation with benefit duration
Italy	The regulations vary according to the regions and the municipalities				
Lithuania	Cash social assistance is defined as nominal amount	By government decision	Explicit equivalence scales. The monthly benefit level, is 100% of the difference between the actual income of a family or single resident and the State Supported Income of LTL350 (€101) per person per month for the first family member, including the cases where Social Benefit is granted only to a child (children), 80% for the second member and 70% for the third and any additional family member	Benefits adjusted at irregular intervals according to governmental decision based upon price index	Social Benefit is unlimited but reduced for long-term recipients. The reduction equals to 20% if Social Benefit is paid 36 to 48 months; to 30% if paid 48 to 60 months; to 40% if paid for more than 60 months. In this case no Social Benefit is granted to beneficiaries without children
Nether-lands	Nominal amounts - monthly net standard rates (excluding family benefits) for persons aged 21 to 65	Minimum wage	Implicit equivalence scales: married couples/ cohabitants with or without children: €1,336.87; lone parents: €935.81; single persons: €668.44. Lower rates for single persons aged 18-20	The standard rates are linked to the statutory minimum wage; they are indexed two times per year	Unlimited, renewable
Poland	Nominal amounts with maximum and minimum limits	By government decision	No equivalence scales. Differential benefit payment, minimum benefit is PLN20 (€4.74) per month; maximum benefit is PLN418 (€99). The exact amount depends on the decision of the Social Assistance Center	Set by the Government every three years by reference to the threshold of social intervention	Unlimited, renewable
Portugal	Social integration income is linked to a reference standard – Index for Social Support (IAS) currently corresponding to €189.52	IAS (%-age of)	Explicit equivalence scales. For the claimant/ beneficiary: 100% of the amount of the social integration income and IAS - €189.52; for each adult: 50% of that amount; for each minor: 30% of that amount	Indexation in line with the social pension from the non-contributory system on an annual basis, and in line with the indexing reference of social support IAS (for certain benefits)	Unlimited, renewable

Country	Principles for determination of GMI benefit amounts	Benefit base	Impact of family composition	Indexation rules	Variation with benefit duration
Romania	Social Aid benefit is linked to RSI - Reference Social Indicator equal to RON500 (€112)	Subsistence minimum set by Government decision	Explicit equivalence scales. The monthly amount of the Guaranteed Minimum Income / maximum Social Aid varies with the number of family members: single - 0,25*RSI; 2-member family - 0,45*RSI; 3 members - 0,63*RSI; 4 members - 0,78*RSI; 5 members - 0,93*RSI. Families with more than 5 members receive 0.062*RSI per person, starting with the sixth member	The amount of the Reference Social Indicator (RSI) is adjusted by Government Decision, based on the Consumer Price Index	Unlimited, renewable
Slovakia	The Benefit in Material Need amounts are derived from a subsistence/living standard indicator, differentiated between first and second adult and child. Benefit amounts are lower than the living standard amount	Subsistence minimum	Implicit equivalence scales for the basic Benefit in Material Need: € 60.50 for singles, € 115.10 for single parents with 1 – 4 children, € 105.20 for couples without children, € 157.60 for couples with 1 – 4 children, € 168.20 for single parents with 5 + children, € 212.30 for couples with 5 + children. Flat supplements for specific categories, Health Care Allowance, Protection Allowance for pensioners and disabled; Activation Allowance for able-bodied in back-to-work programs	Annual adjustment of the Subsistence Minimum on 1 July of each calendar year which takes into account the increases in the net income (or in the costs of living of lower-income households) from the first quarter of the previous year to the first quarter of the actual calendar year. A further adjustment can be made by the Government on 1 September	Unlimited, renewable
Slovenia	Nominal amounts for Financial Social Assistance	Minimum income indicator	Implicit equivalence scales: first adult, or a single person or an adult who is in institutional care - €260.00; increased amounts for first adult, or a single person who is economically active, or young registered unemployed. Reduced amount for single person who is permanently unable to work or elderly. Reduced amounts by 50% for every next adult person, depending on status. Reduced benefits for children and differentiated depending on birth order and education status	Social Assistance and Supplementary Allowance are adjusted in parallel with adjustments of the Minimum Income. The Minimum Income is adjusted according to the legislation regulating adjustments of transfers to individuals and households. Indexation temporarily suspended until 31 December 2014	Financial Social Assistance is granted for up to 3 months first time; can be prolonged for 6 months if circumstances remain unchanged; in special cases benefits may be granted for a maximum of 12 months. Unlimited for those whose social status is not likely to improve and who fulfill other conditions

Country	Principles for determination of GMI benefit amounts	Benefit base	Impact of family composition	Indexation rules	Variation with benefit duration
Spain	Nominal amounts. The Unemployment Non-contributory allowance is linked to Public Income Rate of Multiple Effects IPREM. The Active Integration Income is also linked to IPREM	%-age of minimum subsistence indicator - IPREM. In 2011, IPREM was €17.75/day; €532.51/ month; €6,390.13/ year	Unemployment Allowance equals to 80% of IPREM. For long-term unemployed over 45 years, there is a special 6-month allowance varying from 80% to 133% of the IPREM according to the number of dependent family members. Active Integration Income equals to 80% of the IPREM	Annual adjustment in the General Budget Act taking into account the rise in the national average wage, the Consumer Price Index, the general trend of the economy and the economic possibilities of the system	Unlimited, renewable
Sweden	Monthly maximum nominal amounts are linked to cost of food, clothing and footwear, play and leisure, disposable articles, health and hygiene, daily newspaper, telephone and television fee	By decision of central government and local authorities	Implicit equivalence scales. Single person: €335; couple: €605; Children: from €197 to €373, depending on age. For common expenditures in the households a special amount is added depending on the size of the household, and varying from €106 to €241 (for 7+ persons)	Annual adjustment with the consumer price index	Unlimited, renewable
United Kingdom	Nominal amounts not linked to a poverty line or subsistence standard	By government decision	Implicit equivalence scales. Monthly net standard rates (excluding family benefits) for persons aged 21 to 65: Married couples/cohabitants with or without children: €1,336.87; Lone parents: €935.81; Single persons: €668.44. Lower rates for single persons aged 18-20. Lone parents and single persons can get additional allowance from the municipality for housing costs	Adjustment normally once a year with reference to movements in prices (earnings in the case of Pension Credit)	Unlimited, renewable

Source: MISSOC, status as of July 1, 2012

Annex 3. Design and implementation features of programs that incorporate activation: Lessons from international experience

List of abbreviations

ARGE	Arbeitsgemeinschaft or jobcenter, Germany
BA	Public employment service, Germany
CCT	Conditional Cash Transfer
CWI	Center for Work and Income, The Netherlands
EC	European Commission
ECA	Europe and Central Asia
EU	European Union
MISSOC	The EU's Mutual Information System on Social Protection
OECD	Organization for Economic Cooperation and Development
PRWORA	Personal Responsibility and Work Opportunity Act
TANF	Temporary Assistance to Needy Families
SSN	Social Safety Net
UWV	Administrative office for employed persons insurance, The Netherlands

History and Overview

There is a good deal of international experience in incorporating the promotion agenda into social safety nets in general, and into programs of last resorts in particular. Examples include programs in the USA, Western Europe and increasingly from Latin America and Eastern Europe (Grogger, J. and L. Karoly, 2005; Grogger, J. et al. 2002; R. Blank 2002). Overall, attention to graduation of social welfare beneficiaries became a focus of Social Assistance systems in the USA and Western Europe starting in the 1970s. Earlier reform measures attempted to rationalize and better integrate social assistance programs with social and employment services.

In the USA, a major policy change took place in 1996 when Congress passed the Personal Responsibility and Work Opportunity Act, known as "PRWORA Reforms" (Blank, R. 2002; Haskins 2006). It was based on a paradigm shift that recognized the need for welfare policy to improve the prospects of its beneficiaries rather than emphasizing income supplementation and poverty alleviation. This could be achieved by helping the needy to become self-sufficient, which in turn required integration of active support measures and mutual obligations in assistance programs. Subsequently, cash transfer programs such as the Temporary Assistance to Needy Families (TANF) introduced activation elements, namely an obligation to work, lifetime eligibility limits and referral to social and employment services.

Box 3: Chile *Solidario* program

The Chile Solidario program is designed to provide comprehensive support to the approximately 225 thousand poorest families, or about 5 percent of the population of 17 million. The objective of the program is to help each family meet 53 minimum living conditions across seven dimensions, including individual and property identification, health, education, family dynamics, housing, employment and income. This represents a holistic and unique approach to supporting extremely poor families. Trained counselors undertake personalized diagnostics of a household, its assets, constraints and goals and help draw plans that families commit to follow to achieve targets across these seven dimensions. Social workers monitor families and assist them in achieving set goals by advising and linking them to a range of services, including health, education, psycho-social support, micro credit and public employment services.

Payment of cash benefits begins after signature of an individual contract and is limited to two years during which the value of benefit gradually declines. Women receive benefits on behalf of families and sanctions apply in the event of non-compliance with commitments.

Chile had to reform its public employment services to serve *Solidario* beneficiaries who face multiple barriers to employment. This work included activation elements such as improving employability through provision of adult literacy courses, training and skills. Employment counselors had to be re-trained to work proactively with clients who have no strong attachment to the labor market.

In Latin America and elsewhere, a different social assistance instrument, Conditional Cash Transfer (CCT), employs many of the same principles as activation policies, in particular conditionality, that link receipt of benefits to changes in behavior. Typically, CCT programs promote access to social services (such as health and education) that help recipients build their human capital. Some, CCTs, notably Chile Solidario are used to address multiple barriers and promote a *holistic approach* (see Box 3). Experience with CCTs added to the knowledge of how to design and implement programs with

conditions. (See Fiszbein A. and N. Schady *Conditional Cash Transfers; Reducing Present and Future Poverty*. For a description of new CCT-like pilots in New York City, Dallas, Chicago and Washington, DC see: http://www.time.com/time/nation/article/ (Time, April 8, 2010 and Opportunity NYC http://opportunitynyc.org/.

In Western Europe, major reforms took place in Germany in 2003-05, called "Commission for Modern Services in the Labor Market", more commonly known as the *Hartz Reforms* and in the UK, called the "New Deal" (Policy Exchange 2008, Tergeist, P. and D. Grubb, 2006). Nordic countries, notably Denmark and Norway, also reformed at about the same time (Kvist, J. and L. Pedersen 2007, Duell et al. 2009). Even after the reforms, Western Europe's welfare policies have been relatively more generous, and are based on recognition of social rights and the state's responsibility. Minimum income guarantees and less restrictive time limits on eligibility are more typical of the European activation policies than those of the US. Adoption of activation policies is a way to strike a balance between protection and the need to reduce heavy welfare spending (OECD 2007a and 2007b). Compared with those of the US, welfare policies in Western Europe have been more proactive in helping the unemployed to find employment, putting employment integration at the center.

By the 1990s and 2000s, activation became a feature of the social safety nets (SSN) in almost all OECD countries and it is increasingly used in Eastern Europe and Latin America. Yet evaluation of activation policies shows that they are expensive to administer and implement, and they are not always effective for all types of beneficiaries (OECD 2005; EC 2006; Burt, M. and D. Nightingale 2010). Evaluations further show that well-designed and well-targeted programs may have a positive net impact, but poorly designed and targeted programs most often do not (van den Berg et al, 2006; Finn D. 2008). Evaluations of CCTs are more positive, showing that they are quite effective in encouraging school attendance and lead to improved nutritional outcomes and overall welfare level. Still, most OECD countries that introduced activation as a part of their SSNs continue these policies, while constantly innovating. The popularity of activation policies can be attributed to the fact that activation targets two objectives: an economic objective, by increasing the probability of the unemployed finding jobs, productivity and earnings; and a social objective, by improving inclusion and participation associated with productive employment. This duality helps assure political support for these policies across the political spectrum. CCTs are also increasingly appearing around the world as a pro-active social assistance instrument.

There is no simple, universally applicable blueprint for activation policies. The best approach is to start with a toolkit of good practices, pilot interventions and implementation arrangements on the smaller scale, and then evaluate to find out what works and why.

Good activation programs are tailored to the needs of beneficiaries**.** They are designed following understanding the profile of SSN 'clients' and the specific barriers to employment in their families and them personally which activation should address. Jobseeker profiling is used in a growing number of OECD countries to assess the strengths and weaknesses of unemployed clients, estimate

their chances of finding work and design corresponding intervention strategies. Profiling is usually designed to filter out various easy- and hard-to-place categories of jobseekers, which are offered services of different intensity. Prediction accuracy is therefore an important element in the efficiency of a profiling system, since low accuracy can lead to considerable waste of employment service resources. Despite that profiling techniques differ, the principle is common: profiling systems attribute a "*score*" to the inflow of new registrants and divide them into 'categories', which in principle reflects the risk that they will become long-term unemployed, that allows to determine what menu and level of service will be offered to them, along with their 'distance' from the labor market which allows determining the level of effort which will be put in the activation of the respective registrant (see Box 4).

Box 4: Determining Beneficiary Categories through Profiling in the Netherlands and Germany

The Netherlands has one of the strongest experiences with profiling. In 1999, it introduced the 'chance-meter' as a tool to determine jobseekers distance from the labor market. With the help of a checklist and a decision-making matrix, the CWI counselor assesses the jobseeker's personal situation, occupational and skill profiles and capacity for independent job search. Four groups (phases) of jobseekers are thus established. Those with a significant chance of finding work quickly, *i.e.* within six months, are placed in Phase 1 and normally stay with CWI. The remainder are interviewed a second time to establish their membership of one of the other phases and to determine an advice with regard to reintegration activities, when transferring them to one of the other service providers in the chain (UWV or municipalities). Phase 2 and Phase 3 jobseekers are considered to have a chance of finding work either within a year or after more than one year respectively, with the help of labor market instruments. Phase 4 clients are considered to have only small chances of finding work, due to serious barriers. Sixty to seventy percent of CWI inflow is profiled into Phase 1 and the remaining 30% to 40% into Phases 2 to 4. In terms of stock, however, the distribution is much more slanted to the hard-to-place: in May 2005 out of almost 700 000 unemployed persons 18% were in Phase 1; 20% in Phase 2; 29% in Phase 3; and 27% in Phase 4 (with some cases undecided). There is considerable dissatisfaction in the Netherlands with the current profiling model. Above all, its predictive power has been relatively unsatisfactory: in only 3 out of 5 cases is CWI accurately predicting the timing of exit from unemployment, while many in Phase 1 find work only *after* 6 months, and many in Phase 2 or 3 find work *more rapidly* than predicted. The latter type of client is therefore transferred too rapidly to the UWV or municipalities, before the CWI has had a chance to undertake any placement effort. In addition, UWV and municipalities undertake their own profiling, before classifying their clients into target groups contracted out to private providers. The Ministry of Social Affairs and Employment has evaluated the profiling system and will probably replace it, starting in late 2006 or 2007, by a classification of jobseekers into two groups based on their capacity for independent job search.

Germany also classifies jobseekers into four groups: (1) 'market clients' who need no support since they are expected to find a new job rapidly; (2) those who need support with motivation and job-search strategies; (3) those with skills deficits or other obstacles that need specific measures; and (4) clients who are not considered placeable within the next 12 months (after which they will be transferred to the local ARGE). The BA concentrates its efforts on client groups 2 and 3, and has been criticized for hardly spending any effort on group 4, although it suffers a financial penalty for every person that becomes long-term unemployed. The ARGE usually adopt the BA.s four-way classification, but they have a much higher share of group 4 clients than local BA offices. Only after transfer to an ARGE do they receive the intensive service corresponding to their official designation (*Betreuungskunden*).

Source: Peter Tergeist and David Grubb. Activation Strategies and the Performance of Employment Services in Germany, the Netherlands and the United Kingdom. OECD Social, Employment and Migration Working papers No. 42. DELSA/ELSA/WD/SEM(2006)11

Good activation programs are built on the principle of *mutual obligation,* also known as *rights and responsibilities,* and combine incentives and sanctions. Good activation policies are those that succeed at moving welfare recipients to work. The *mutual obligations* principle is an example of conditionality, and it involves effort and public investment in helping welfare beneficiaries, who are in turn required to commit to using the newly available opportunities in the most effective way. An individual-level framework of incentives and sanctions serves to encourage beneficiaries to make full use of such opportunities. Titles of successful activation programs often already reflect the incentives and project the image of rewarding reintegration in the labor market, e.g. in case of UK's "New Deal" these are called Jobseekers Allowance; Income Support and Employment Support Allowance.

Box 5: Examples of financial incentives in OECD countries

Back-to-work bonus: Ireland: back-to-work allowance is limited to three years and decreasing over time; UK: long-term unemployed receive a one-time bonus when accepting a new job; Australia: Employment entry payment – lump sum paid when entering employment, eligible every 12 months.

Earnings disregard: France: Continue to receive minimum income benefits while getting paid up to 750 hours per year (lasting max. 12 months); Netherlands: Internship program for young unemployed, one-time remuneration of 450 euro for 3 months internship, while still receiving unemployment benefit; Belgium: For the long-term unemployed and unemployed older than 45 years old, non-market work arranged by Local Work Agency to a maximum of 45 hours a month, net wage is set by municipality.

Source: Banerji A (2006)

The mutual obligation is a vehicle for promoting employability but also a powerful targeting instrument in social assistance. Sanctions and conditions in activation are centered on strict obligations to actively search for jobs. Beneficiaries are required to make use of opportunities to increase their employability and exercise greater flexibility in adapting to labor market conditions, including accepting less attractive employment options when better options are not available and mandatory participation in community work. Sanctions, such as benefit suspension, are imposed when beneficiaries fail to comply with obligations. Other measures include limiting the duration of benefits and reducing the value of individuals' benefits as their length of unemployment increases. For more details on the benefits and concerns related to employment behavior related conditionalities for SSN beneficiaries in OECD, see Box 6.

Box 6: Targeting: The right mix of rights and responsibilities, for the right people, at the right time

The attraction of a 'rights and responsibilities' approach is that it potentially increases employment while improving the targeting of minimum safety nets. By imposing more demanding behavioral conditions for benefit receipt, it makes work relatively more attractive and limits opportunities for benefit claims that might be considered "undeserving" (e.g. those with incomes from undeclared employment or a strong preference for leisure). At the same time, work-related behavioral requirements seek to improve employability. Both effects would in theory reduce the number of beneficiaries, and this effect can be further strengthened by providing job-search assistance and other employment-oriented support. With a reduced number of beneficiaries and stronger work incentives, more adequate support is feasible for those who need it most.

But a second concern of targeting efficiency is that those unable to achieve self-sufficiency should not be left without sufficient support. As discussed, the downside of stringent requirements is that they can make support inaccessible for some. Sanctioning those unable to comply reduces benefit expenditures but clearly makes no sense from a redistribution point of view. Policymakers would likely be concerned if sanctions for failing to comply with work requirements are frequently applied to individuals who are in fact not ready for work. Evidence suggesting such a pattern in the US shows that this is a real danger (Pavetti *et al.*, 2003). For instance, decisions about sanctions can be affected by administrative error with potentially grave consequences for sanctioned families. In this context, a transparent and efficient appeals process, while costly to operate, is an important element of an effective benefit administration. By providing some evidence on the frequency of unjustified sanctions, it can also help uncover structural problems, such as insufficient resources to properly account for clients' circumstances. Children, who are directly affected by benefit cuts but can do little to avoid them, are a group of particular concern (although many countries implicitly recognize this by protecting child-related benefit amounts from sanctions, this does not protect children from deteriorating living standards caused by cuts in non-child-related benefit components). This issue can in principle be tackled from two sides. First, behavioral obligations and the sanctions that back them up, should take account of individual circumstances. Second, those who are not job-ready can be given an opportunity to participate in programs aiming to overcome employment barriers.

Participation in these support programs can be made mandatory. Other work-related support measures should seek to address barriers that are not primarily related to the employability of the individual (e.g. childcare for parents). Targeting is therefore key forboth ends of the mutual obligations. In view of the wide heterogeneity of the group of minimum-income benefit recipients, implementing effective targeting mechanisms presents a major challenge.

Source: H. Immervoll. Minimum-Income Benefits in OECD Countries: Policies and Challenges. OECD, 2009.

A personalized and proactive approach combined with a range of options for individuals and their counselors to choose from is essential. Most advanced activation programs moved towards an individual and flexible approach, acknowledging diversity (e.g. age, experience), becoming relevant to the individual's needs, wishes, and priorities. The steps for such an approach include: the assessment of needs and constraints (most vulnerable groups typically face multiple constraints), mapping needs and different programs through the development of a personal plan (programs and services not directly related to the labor market are likely to be important), referrals, service

integration, counseling, and follow-up. Frequent and personalized interventions of agencies during individual's unemployment spell are also a feature. Most OECD countries introduced much more frequent contacts with the responsible labor or social offices. Some countries go as far as classifying beneficiaries into categories depending on their level of remoteness from the labor market (i.e. the UK and Germany).

Connecting beneficiaries to supplementary services such as childcare, retraining, counseling, job subsidies, job placement, and abuse counseling, is important. Welfare recipients often face multiple barriers to entering the labor market. These may include employability barriers: work skills, training, experience; behavioral; health issues (alcohol, drug, depression, etc.); physical health problems, disabilities; mobility barriers related to transportation, childcare, bring a single-parent; other barriers (language, domestic violence, criminal record). A good referral system is instrumental in addressing barriers. Quality of supplementary services is critically important.

A case-management approach is critical**.** A case manager is a social worker who is trained to: deliver an individualized approach to individual beneficiaries, based on their specific situation and potential; to determine which activation services would work best and facilitate effective referral; and track the progress of beneficiaries and introduce remedial action when needed. A good case manager is able to secure the trust of beneficiaries and full involvement in designing and implementing a personal graduation plan. Maintenance of regular contact and provision of psychological support are important when dealing with hard-to-serve recipients. Most OECD programs rely on case management.

It will be necessary to reform institutions that currently function as sources of handouts, so that they function as brokers to provide tailored support and guidance. Such institutional reform will link those subject to activation policies to support that will help them increase their earnings. Changes in institutional arrangements and greater coordination across institutions are necessary. Advanced activation programs introduce innovative service delivery arrangements such as *one-stop shops*. One-stop shops are designed to reduce transaction costs for beneficiaries by co-locating services such as employment and welfare. Convenience and client-friendly environment are important consideration. A step further is the *functional integration* of the employment services and social assistance into a single service provider.

Stepping up the role of unemployment registration should be considered as an immediate step towards greater functional integration of employment and social assistance institutions. Most of the OECD countries' legislation 'prescribes' mandatory registration as job seeker. The registration can serve as a referral to services offered by the employment counselors which should be a part of the mutual obligation contract. The registration should take place in parallel with claiming social assistance, with no waiting period, to reduce as much as possible the duration of stay on passive social transfer.

While there is a critical role for a coordinating agency or ministry, no single entity can deliver all the requisite services. For some services (training, child care, psycho-social support), government agencies need not be the primary providers; it is best to encourage multiple providers, while at the same time ensuring quality standards and coordination. OECD countries increasingly rely on private delivery of services (e.g., for training, employment services, and public works if any). Contracting out service delivery for the national and local governments through flexibility and accountability, (based on the example of the UK) is one way to improve cost-effectiveness. The government's role in these situations has been to establish overall priorities, ensure quality, and provide financing, especially to address equity concerns.

Box 7: Prioritizing Youth in Argentina

The Argentina Youth Program targets youth aged 16-24 who have not completed secondary school. Youth register at employment office and sign contract. This provides access to tutors who advise them on available services: labor orientation and employability workshops, referrals to adult education services; referrals to professional training courses; short internships with employers; job placement. The participants receive a stipend as long as they are participating in an activity. They can also receive bonuses if they successfully certify their education level or complete training course. The program duration is up to 2 years, but can be extended to 3 years if individual is attending education or training courses.

Finally, since activation requires numerous multi-dimensional policy changes, many countries implement it *in phases*, gradually encompassing new target groups. It is quite common to start with activating narrow groups that respond to incentives most first, and then scale up to other vulnerable groups. Australia, Argentina, the UK and the Netherlands for example have temporary employment programs targeted *only* to long-term or young unemployed. Given the specific profile of young unemployed, they have introduced innovative activation efforts as the so-called 'Intermediate Labor Market' programs (UK) which builds on the concept for 'transitional jobs' in the USA and involves access to jobs that are as close as possible to regular employment; combining work experience with skills training and/or numeracy and literacy training.

Conclusion: A balance between protection and promotion - how much of activation is appropriate?

Activation is only one of the goals of social policy, and it is sometimes at odds with other goals. Society values independence, self-sufficiency and responsibility, but it also wants to care for the needy. It is difficult to determine why people are not working or, if they are working, why their earnings are so low, but the reasons will determine whether they need care or activation. A good social protection system balances care (understanding that it may create work disincentives, and trying to minimize them), and activation (understanding that sanctions applied to those who instead need care will harm them, and trying to target better).

Activation is not a substitute for a safety net and there is always a portion of the population that needs to be protected, since it would not be able to respond effectively to work incentives. In addition to the international experience lessons, two home-grown experiences, one ongoing and one completed provide lessons for both design and delivery of activation policies.

Annex 4. Guaranteed minimum income programs: behavioral requirements and benefit sanctions in selected EU and OECD countries

Country	Registration as unemployed	Job search requirements	Job acceptance and exceptions	Work and / or social integration requirements	Implications of refusal / sanctions	Other behavioral conditions
Latvia	Required	Yes	Suitable job	Work – required SI - required	Total amount of benefit is reduced by the part of the person who has refused	Beneficiaries are obliged to co-operate with social workers in order to overcome the situation through provision of information, personal attendance, participation in measures promoting employment, acceptance of medical examination, participation in medical and social rehabilitation
Australia	Required	Yes, proof every two weeks	na	Yes	From 'warning' to 100% benefit withdrawal	Behavioral requirements can be extended to other family members
Austria	Required	Yes	'Reasonable' work, exceptions related to age (men over 65; women over 60)	na	Denial of benefit	Cooperation with employment services
Belgium	Required	Demonstration of willingness to work, and evidence of job search	Obligation to accept 'suitable' job. Exceptions are possible for health reasons	Yes	Benefit (Integration income) can be denied to a person who is not willing to work	Participation in employment, social integration or individualized social integration project offered by the municipality
Bulgaria	Required for at least 9 months before claiming social assistance	To have not rejected any jobs offered or qualification courses offered by the Employment Offices	Exceptions for able-bodied with care respon-sibilities, health conditions, full-time students and pregnant women	Work - required	Denial of benefit to the person who have refused job or training, first refusal – 1 month; second – 1 year	Could be identified and included in the Individual Employment Plan
Canada	Required	Yes	Yes	Yes	Up to 100% withdrawal	Regular confirmation of circumstances; verification periods vary by provinces

Country	Registration as unemployed	Job search requirements	Job acceptance and exceptions	Work and / or social integration requirements	Implications of refusal / sanctions	Other behavioral conditions
Czech Republic	Recipients, unless employed, must register with the Labor Office as jobseekers	No specific independent job search requirement but willingness to work is basic condition for being treated as a person in material need	Accept any job, even short-term or less paid. Exclusions due to age, health status, disability or family situation (care responsibilities)	Yes	Participation is obligatory and is subject to verification. Refusal to participate results in exclusion form social assistance receipt	To actively look for a job, accept any employment, participate in active employment programs, public works, public service
Denmark	Required	Required for both spouses	Appropriate job	Work - required	Payment is suspended if the beneficiary or his/her partner refuses without sufficient reason to participate in activation measure or repeatedly fails to report on job search	Behavioral requirements are extended to other family members
Estonia	Required registration with the Estonian Unemployment Insurance Fund	Required	To be available for suitable work	Yes	Refusal to grant the benefit to those capable of work and aged between 18 and pensionable age, who are neither working nor studying and have repeatedly refused, without reason, training, or suitable work or have refused take up of social or employment services	Fulfillment of other conditions and activities can be agreed in an individual job searching plan
Finland	Required	Required	Required, suitable job	Work - required	100% benefit withdrawal for 60 to 90 days	Action plans mandatory for certain groups; regular confirmation of circumstances

Country	Registration as unemployed	Job search requirements	Job acceptance and exceptions	Work and / or social integration requirements	Implications of refusal / sanctions	Other behavioral conditions
France	Required	Obligation to look for work	Suitable job	Work – required SI - required	na	To take the necessary steps to generate one's own activity or to participate in integration activities
Germany	Required	Required for beneficiaries capable of working and persons living with them in a domestic unit	Take up of reasonable job Exemption for people with disability and those taking care for children under 3 years	Yes	From 10% to 100% withdrawal for 1.5 to 3 months	Specific conditions for (a) the basic security benefit - to take part in all work-oriented inclusion measures; to enter in integration agreement with the job center; (b) for occupational integration benefits; (c) for the starting allowance and loans for self-employed beneficiaries. Take up of services provided by the local authorities for the care of minor or disabled children and for home care of family members; debt counseling, psychological support and addiction counseling. Update of action plan every 6 months
Hungary	Required for benefit for persons in active age / employment substituting benefit	Required	Suitable job	Work - required	The entitlement to the benefit is terminated if the person is deleted from the registry of job seekers due to his/her own fault, if (s)he refuses a proper job, works, cannot prove that in the previous year (s)he pursued a gainful activity, or took part in training or labor market program for at least 30 days	To cooperate with the public employment services; to participate in training programs, guidance, programs which help to prepare for work, etc. Proof of independent job search every 3 months
Ireland	Required	Jobseeker's Allowance recipients must be available for, capable of and genuinely seeking work	Required	Yes	100% benefit withdrawal for weeks	All persons unemployed for 3 months must participate in the National Employment Action Plan aimed at assisting them to enter or re-enter the labor market. Confirmation of circumstances – every 4 weeks

Country	Registration as unemployed	Job search requirements	Job acceptance and exceptions	Work and / or social integration requirements	Implications of refusal / sanctions	Other behavioral conditions
Japan	Not required	Required	na	Work – no SI - no	From warning to 100% withdrawal	Confirmation of circumstances every 4 weeks
Lithuania	Required registration with the local office of Labor Exchange or another EU MS employment service	Required	Required		Refusal of job offer, training, public duties or works supported by the Employment Fund may cause suspension of, or refusal to grant, social benefit	
Nether-lands	Required registration with the Institute for Employee Benefit Schemes	Required. The partners of unemployed should also look for work	Required acceptance of suitable employment	Yes	Cut or reduction of benefit in case of non-cooperation. Medical and social factors are taken into account, and childcare obligations	The parent is however obliged to attend training courses. If the children are aged 5 or older, cases are examined individually to determine the exemption from this obligation. If all attempts are unsuccessful, the social services will help to find work or training
Poland	Required	Required	Obliged to undertake offered work	Work – required SI - required	Refusal to grant or withdrawal of social assistance benefit; reduction of integration allowance	Cooperation with social services; regular confirmation of circumstances; in certain cases proof of independent job search; individual plan
Portugal	Registration with job center is required	Required	Required, any offered job	Work – required SI – required, with exceptions	Cancellation of registration with the job center	To obtain the benefit, the claimant must accept the obligations stemming from the integration contract. The obligations contained in the integration contract include: accept proposed jobs and vocational trainings; attend courses; participate in occupational programs or other temporary programs stimulating labor market integration or meeting social, community or environmental needs; undertake professional counseling or training actions; take steps regarding prevention, treatment or rehabilitation of drug addiction and incentives to take up self-employment

Country	Registration as unemployed	Job search requirements	Job acceptance and exceptions	Work and / or social integration requirements	Implications of refusal / sanctions	Other behavioral conditions
Romania	Required	No	Acceptance of community work. Exemptions for non-prime age recipients, attending vocational training or professional or other activity	Work – required One family member is obliged to work in the interest of the local authority	Failure to comply results in suspension of the Social Aid	
Slovakia	Registration with the Office of Labor, Social Affairs and Family is mandatory for activation allowance	Required for activation allowance	Suitable work	Taking suitable work, training or community work is optional for the beneficiary but obligatory for getting the activation allowance	The person receives only the basic benefit in material need	The take up of activation allowance is conditional on participation in training, municipal works or other suitable work
Slovenia	Required	Required	Required acceptance of any job after receiving Social Assistance for a certain time, i.e. 9 times in the last 12 months		Refusal to grant the benefit or benefit withdrawal in case of voluntary termination of employment, refusal of job offer or refusal/ abandonment of ALMPs	
Spain	Required	Required	Yes, suitable job	Yes	100% withdrawal from 4 weeks to indefinite	Confirmation of circumstances every 3 months and intensive interviews every 3 months
Sweden	Required	Required	Required	Yes	Sanctions exist, they vary by municipality	Social assistance is conditional to participation in ALMPs; also on intensive interviews, regular confirmation of circumstances, individual action plans

Country	Registration as unemployed	Job search requirements	Job acceptance and exceptions	Work and / or social integration requirements	Implications of refusal / sanctions	Other behavioral conditions
United Kingdom	Required	Required	Required – to be available for 'all work'	Yes	Termination of benefit from 2 weeks to 26 weeks	For Jobseekers' Allowance - must sign a Jobseekers' agreement detailing the type of work, hours and activities to be undertaken by the jobseeker in their search for work; initial intensive interview with quarterly follow ups, confirmation of circumstances every 2 weeks, proof of independent job search every 2 weeks. Requirements can be extended to other family members afer recognizing caring responsibility
United States	Required (for Food stamps)	Required (for Food stamps)	Required (for Food stamps)	Required (for Food stamps)	100% withdrawal for minimum of 1 month	Confirmation of circumstances rules vary by state, proof of independent job search can be required, requirements are extended to other family members as well

Source: MISSOC, status as of July 1, 2012, and national legislation

Annex 5. Audit of means-testing procedures in the UK

The auditing of the means-testing procedures for last-resort social assistance programs is not common practice among EU governments. This kind of audit was first launched in the UK, where a unique audit of means-testing procedures was performed by the National Audit Office in 2011. The audit has been prepared under the provisions of the National Audit Act 1983 and the results were presented to the House of Commons. The audit results were summarized in a Report by the Comptroller and Auditor General (HC 1464 SESSION 2010-2012, 13 September 2011).[15]

Objective. The objective of the audit was to increase the efficiency of public spending on non-contributory cash transfers and identify the risks to value for money that arise from the design of means-testing procedures. The rationale for the audit stems from the fact that means testing affects 13 per cent of public spending in the UK. Over 2009-2010, the UK Government spent £ 87 billion on means-tested benefits. In an environment of major reforms, it will be difficult to achieve value for money unless departments understand the impacts of means testing, unless they learn from past experience and coordinate between programs. The UK Government has announced major reforms to means-tested benefits as of 2013. These include replacing a number of benefits for those of working age with a new means-tested Universal Credit, and changing the extent of means-testing: (a) reforms in the state pensions should reduce the reliance on means-tested Pension credit while (b) means-testing of child benefits so that the higher-rate tax payer families are not eligible for them as of 2013.

Scope of audit. The audit covers both the design and implementation of means-testing building on the assumption that effective implementation and design can address many of the adverse consequences of means testing, including the burden on clients.

The audit of design encompasses (a) a critical assessment of design choices, such as the type of means to include in the test, level of complexity of the means test, and whether it can be well or poorly understood by the claimant; (b) how the costs of the means test are managed and predicted; (c) impact of means testing on reducing public spending against its costs; (d) gaps in assessing impacts (e.g. whether departments assess the burden of means testing on claimants such as the cost of completing application forms and soliciting advice) and (e) to what extent the knowledge of impacts of means testing has been used effectively and shared across departments, and to what extent it has been embedded in the design and implementation arrangements of new programs.

The audit of implementation focuses on (i) whether administration in the departments that deliver means testing is streamlined; (ii) whether and what kind of rules and procedures are put in place to prevent error and fraud, to manage overpayments and underpayments, etc.; (iii) what kinds of measures are undertaken to increase take-up of benefits; (iv) what kind of institutional arrangements support

[15] The report can be found on the National Audit Office website at www.nao.org.uk/means-testing-2011

targeting and reduce complexity; and (v) what are the effects of interaction across programs managed by different departments.

The burden on clients is assessed through looking at the costs which claimants incur when applying for benefits or reporting on change in their income or assets. These costs involve: (i) financial costs, such as the costs for calling a government benefit hotline from a mobile phone; (ii) time, such as the cost of filling a form; and (iii) psychological, including the 'stigma' and uncertainty of claiming benefits.

Methodology The audit applies four analytical methods as follows:

Document review – review of departmental internal and external documents, including departmental assessments of means-tested benefits, annual reports and accounts; business cases, impact assessments and departmental research papers and write-ups on consultations, for example on error and fraud; departmental methodological guidance on, for example, how to assess redistributive impacts in the HM Treasury Green Book; third party and academic publications to identify the information available on the impacts of means testing;

Interviews – with finance, policy and strategy staff of departments and agencies which administers means-tested benefits, as well as HM Treasury. The audit officers also spoke to cross-departmental teams such as the Child Poverty Unit, and departmental economists. The interviews aimed at understanding what frameworks are used to apply means testing, identifying issues related to means testing in programs and proposed reforms. More specifically, the interviews covered the following areas of discussion: (i) the impacts of means testing, the trade-offs recognized between different impacts, and how means tests relate to other objectives of benefit programs; (ii) quality of data and information available on the impacts of means testing, issues of interpretation or definition in measurement, and clarifications on specific data or analysis, for example the methodology used to calculate unit costs of administering benefits; (iii) the design choices and different means tests available, and the consequences of different design choices, and (iv) risks arising from the interaction of different means tests and responsibilities for coordinating between means tests.

Expert interviews - with academics and third party welfare experts, also with independent research and consultancy bodies such as the Institute for Fiscal Studies and Citizens Advice to gauge wider context and perceptions of means testing and identify impacts of current programs and issues for proposed reforms. These interviews explored similar questions to departmental interviews but focused on identifying trade-offs created by means testing, on recent academic evidence of impacts and on risks arising from interaction between means tests.

Analysis of management and statistical information – departmental, agency and third party data on costs, fraud and error, take-up, distribution of benefits and incentives to estimate the impact of means testing on departments and claimants. The internal data sources included financial data from departmental resource accounts, data on departmental program and administrative costs; departmental estimates on take-up, number of claimants, changes of circumstances, error and fraud, overpayments and underpayments, also departmental research on incentives and claimant burden.

The external data sources include Office of the National Statistics published data on distribution of income, third party research on issues of take-up, incentives and claimant burden, Citizens Advice data on case load and selected cases, results from evaluations and other sources.

Main findings of the audit The main findings relate to how well the benefits are targeted however findings of such audits could be broader, in this particular case the audit considered also the effects of means testing on incentives to work, as well as the costs of delivering and claiming benefits.

Targeting outcomes The audit revealed that the predominant part of the budget for means-tested benefits goes to recipient households which belong to the poorest and second poorest quintile of the UK population—the poorest two fifths of households receive 71 percent of total means-tested expenditure. It also revealed that the proportion of income made up of benefits in the income of the poorest quintile is quite high at 34 percent compared to 0.4 percent for the richest quintile.

Poverty impact The audit concluded that means-tested benefits helped achieve social objectives such as poverty reduction and income redistribution at lower cost than universal benefits. People who received the Working Tax Credit for example received £3,173 per year on average in 2009-10. If this amount were provided universally, the cost would have been £122 billion, more than 16 times the actual expenditure. The Department for Work and Pensions estimated significant benefits to society of redistributing income from richer to poorer groups based on evidence that £1 of income is worth more to a poor person than to a rich one. On average, for every £1 spent by the UK government on means-tested transfers, there were 75p of additional social benefits as a result of redistribution. Means-tested transfers proved to be more redistributive than other forms of benefits.

Take up The audit pointed out at low take up of certain benefits; many households in need do not take up their entitlements to means-tested benefits. The highest take up has been observed with the last-resort income support, the child tax credit and the housing benefit. The lowest take up was in the case of means-tested legal aid, carer's allowance and job seeker's allowance. Low take up makes it difficult to target spending to the poorest. Those who do not take a certain benefits for which they are eligible are most also likely to fail taking up other benefits.

Means-test and incentives The audit revealed that as a result of the withdrawal of benefits and the introduction of taxes, many people in the UK faced high effective marginal tax rates which have important effects on incentives to work. The Institute for Fiscal Studies estimated that in 2010, 13 percent of workers faced effective marginal tax rates above 70 percent, while 2.6 percent faced rates above 90 percent.

How much benefits cost to deliver? The audit looked at the cost per claim of delivering means-tested benefits. It tends to be higher than the cost of claim for contributory or universal benefit. For example, the cost of a new claim for income support was £181 and the cost of an existing claim was £116, while the cost per claim for universal child benefit was £11. The Department for Work and Pensions estimated that the higher cost for means-tested benefits is largely due to the greater complexity of assessing eligibility, and the need to take into account changes in financial

circumstances of clients. The cost of benefit delivery takes also into account the impact of overpayments and underpayments due to mistakes made by claimants and officials.

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AN EVALUATION OF ACTIVE LABOR MARKET PROGRAMS (ALMPS) AND RELATED SOCIAL BENEFIT PROGRAMS

LATVIA: BEST PRACTICES AND CONSTRAINTS IN PROVISION OF TRAINING SERVICES AND EMPLOYMENT INCENTIVES

Arvo Kuddo

June 2013

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Introduction[1]

The Latvian economy has begun its recovery from recession, with positive real GDP growth having resumed in 2011, but the effects of the crisis on the labor market are far from over. With fewer jobs on offer, the risk of staying unemployed for over a year is real for a substantial number of people. This could result in more social exclusion and poverty.

Between 2008 and 2010, the employment rate in Latvia plunged from 75.8 percent to 65.0 percent (aged 20 to 64), and unemployment rate surged from 8.0 percent to 19.8 percent. The situation has ameliorated somewhat, with unemployment falling to 14 percent in 2012. Registered unemployment echoes LFS-based data. The number of registered unemployed tripled, and increased from 57,000 in 2008 to 178,000 in 2010 and 147,000 in 2011 (annual average stock) (see Annex, Table 7).

The surge in registered unemployment is accompanied by other negative trends. The number of job vacancies offered by employment services dropped significantly, and the ratio of job seekers to one registered vacancy rapidly worsened. In December 2009 in Latvia, more than 100 job seekers were registered per one vacancy. In the third quarter of 2012, the job vacancy rate in Latvia was the worst among EU10 countries (Annex Table 8). This could lead to longer unemployment spells for many job seekers in the coming years. Migration is also a significant factor in shaping the labor markets in Latvia. Between the last two population censuses (2000-2011), Latvia lost 13 percent of its population: the number of inhabitants declined from 2.377 million to 2.086 million, and negative net migration contributed to around 190,000 of this decline.

Constraints on public finances associated with the crisis limit the scope of labor market interventions. However, in the last few years Latvia has significantly increased the funding of "traditional" employment programs provided through the State Employment Agency (SEA), using also the resources received from the European Social Fund. Public expenditure on labor market policies increased from 0.48 percent of GDP in 2008 to 1.34 percent in 2009 but then dropped to 0.69 percent in 2011. Expenditures on labor market policy measures (ALMPs) increased from 0.08 percent in 2008 to 0.51 percent in 2010 but in 2011 fell to 0.33 percent of GDP. Amongst the costliest programs are the training programs and employment incentives.

The Government of Latvia has been putting in place measures to increase the efficiency of active labor market policies. The current policy note focuses on contributing background for policy discussion on an important employment policy concern in Latvia—training programs and employment incentives—and analyses an international experience in this field relevant to Latvia.

[1] This note was prepared by Arvo Kuddo, the World Bank (HDNSP)

Training programs

The population in Latvia is highly educated. According to the 2011 population census data, by educational attainment, for example, at age group 25-29 years, 37 percent of population had higher education, 21 percent had vocational secondary education or professional education, and 21 percent, secondary general education (Annex, Table 9). However, at age group 25-39 the number of population with primary or lower education is also quite significant.

Labor demand in Latvia has yet to fully recover following the crisis. The level of vacancies in Latvia is very low both in comparison both to the pre-crisis levels and to other EU countries. The available vacancies are filled very quickly which is not consistent with the idea of notable mismatches between supplied and demanded skills. In fact, very few businesses report labor shortages (Hazans and Dmitrijeva 2013). Hence, skills are not the explanation behind the current unemployment situation. However, from the perspective of longer-term, it is important that the economy focus on increasing and keeping up-to-date the skills of workers. Enterprise surveys indicate that Latvian employers see inadequate workforce skills as one of the main constraints to the activity of their firms, with innovative firms more affected by skill shortages than more traditional firms. Inadequate workforce skills are a more severe obstacle to firm growth than labor regulations. The percentage of employers who view inadequate workforce skills as a major obstacle to firm operation (39 percent in 2009) is significantly higher than that of employers who view labor regulations as a major obstacle (12 percent) (Table 1). Moreover, in the 2000s, the ratio of employers complaining about inadequate skills levels of workforce increased. It should be noted that since the crisis insufficient demand has replaced skills as the main limitation for enterprise activity (Hazans and Dmitrijeva 2013).

Table 1: Percent of Firms Identifying Labor Regulations and an Inadequately Educated Workforce as a Major Constraint in Doing Business

Economy	Year	Percent of firms identifying labor regulations as a major constraint	Percent of firms identifying an inadequately educated workforce as a major constraint
Bulgaria	2009	12.6	21.3
Czech Republic	2009	12.2	29.3
Estonia	2009	7.4	30.4
Germany	2005	9.6	7.0
Hungary	2009	8.6	6.4
Ireland	2005	9.6	15.6
Latvia	2009	11.8	39.1
Latvia	2002	4.0	15.8
Lithuania	2009	15.7	40.0
Poland	2009	26.7	36.5
Romania	2009	23.6	43.1
Slovakia	2009	8.6	29.5
Slovenia	2009	14.5	15.4

Source: World Bank: www.enterprisesurveys.org

In focusing on skills, the skills that workers possess often do not meet the skills needs of employers. In addition, a skills gap is a critical concern: workers lack certain key skills required in the newly created jobs. This includes both "hard" skills, such as technical qualifications and competences, and

"soft" or generic skills, such as job attitudes and behavioral skills. Employers increasingly expect job applicants to have appropriate job attitudes and behavioral skills—the so-called "soft" skills. These include responsibility, reliability, motivation, commitment, communication skills, and the ability to work in a team. Technical and vocational qualifications—the so called "hard" skills—are important, too, but the soft skills are critical for employability (Rutkowski 2011).

Evidence shows that employers do not recruit people based only on their formal qualifications (vocational or academic), but also look for other competences that add value to their organization. They prefer flexible workers able to adapt quickly to unforeseen changes.

Following the economic downturn, the rise of employment could stall because available stock of skills that were employed during the pre-crisis period is different from the skills demanded after the crisis. This is likely to be the case given the strong sectoral shift away from construction. Those job losses are unlikely to be recovered. It is difficult for the unemployed who were laid off from shrinking sectors to re-enter employment without requalification (OECD 2011a).

Lifelong learning and NEET

Upgrading of the labor force, or vertical mobility, is a precondition for rapid structural and technological change in all countries, for competitiveness in the world market, and for raising the share of high-value-added products and services in the markets. The world is moving towards a "lifelong learning" (LLL) system, which means not just improving basic skills of adults, but enabling them to continue to develop a range of skills, and to enhance their employability throughout their lives. Investing in education and training after leaving initial education is essential for upgrading the skills of the labor force.

In practical terms, LLL is distinguished from 'education and training' by its emphasis on, inter alia, the removal of barriers within education and training systems and complementing learning with non-learning support measures such as guidance and counseling. Such measures enable individuals to participate in education and training throughout their lives.

One of the Lisbon employment targets dealt with lifelong learning and called for the EU average level of participation in lifelong learning to be at least 12.5 percent of the adult working age population (25-64 year age group) by 2010. The Europe 2020 strategy has a goal to reach 15 percent of the adult population in Europe to participate in LLL by 2020, against a baseline of 7.1 percent in 2000 and 9.5 percent in 2008.

The proportion of the adult population (25-64) engaged in LLL varies from 31.6 percent in Denmark to just 1.4 percent in Romania. Latvia has a LLL strategy in place since 2009 but according to the latest Eurostat labor force survey, participation in LLL (7.0 percent) is still below the EU benchmark (Table 2).

The European Social Fund (ESF) is a major funder of lifelong learning (LLL) across the EU. For the period 2007-2013, over €32 billion is allocated to corresponding programs, representing 42 percent of the total ESF budget for this period. An estimated 5 million young people, 5.5 million individuals with low skills, and 576 000 older people benefitted from ESF supported LLL activities across the EU between 2007 and 2010.

Table 2: Participation of Adult Population in Lifelong Learning, and NEET, %*

	Lifelong learning				NEET	
	2005	2012	2005	2012	2005	2012
	Aged 25-64		Aged 25-34		Aged 15-24	
EU27	9.6	9.0	15.7	15.3	12.6	13.2
Bulgaria	1.3	1.5	4.2	4.9	25.1	21.5
Czech R.	5.6	10.8	9.6	16.0	13.3	8.9
Denmark	27.4	31.6	38.8	43.1	4.3	6.6
Germany	7.7	7.9	16.7	18.1	10.9	7.7
Estonia	5.9	12.9	12.6	21.4	10.2	12.5
Latvia	7.9	7.0	14.0	12.4	10.0	14.9
Lithuania	6.0	5.2	12.7	10.5	8.6	11.1
Hungary	3.9	2.8	9.3	6.6	12.9	14.7
Poland	4.9	4.5	11.2	9.9	13.9.	11.8
Romania	1.6	1.4	4.2	3.7	16.8	16.8
Slovakia	4.6	3.1	7.8	5.7	15.8	13.8
Slovenia	15.3	13.8	28.3	24.7	8.9	9.3
Sweden	17.4	26.7	25.2	35.5	10.5	7.8
UK	27.6	15.8	33.0	19.9	8.4	14.0

*- Life-long learning refers to persons aged 25 to 64 who stated that they received education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding those who did not answer to the question 'participation to education and training'. Both the numerator and the denominator come from the EU Labor Force Survey. The information collected relates to all education or training whether or not relevant to the respondent's current or possible future job.
NEET are defined as youth "neither in employment nor in any education nor training". This definition of NEET includes: (i) unemployed persons (according to ILO definition) not in any education and training; (ii) inactive persons (ILO definition) not in any education and training.

Source: Eurostat online

While lifelong learning improves employment performance and productivity, there are reasons to assume that market failures, such as the fears of poaching the trained worker by other firms, or credit constraints, prevent firms and workers to invest sufficiently in this area (Ok and Tergeist, 2003).

Another useful concept for the analysis of training outcomes is the NEET defined as youth "neither in employment nor in any education nor training". In particular, the labor market situation of young people is usually described through indicators such as the employment rate and unemployment rates or ratios which provide information about the relative situation of young people who already have a job or are actively looking for one. NEET have caught the attention of policy makers in the EU as a useful indicator for monitoring the labor market and social situation of youth in the context of the EUs new Europe 2020 growth strategy and its corresponding Employment Guidelines. In EU27 in 2012, 13.2 percent of the youth where idle while in Latvia the ratio was 14.9 percent and is increasing.

There is a range of reasons why young people become NEET. For example, NEET can include early school leavers from education and training that do not find a job, young women taking care of children, recently graduated people taking time off before taking up employment or young people who are unemployed between contracts.

The recent increase in NEET figures are mostly a result of the economic crisis which lead to a sharp increase in youth unemployment, in particular for young men, and made it harder for young people to make the transition from school into work. Much of NEET is related to the high drop-out rate from vocational education.

If the programs are properly designed, the State Employment Agency in Latvia could contribute to improving lifelong learning outcomes in the country and reducing the number of youth neither in employment nor in any education nor training. For example, Latvia should consider moving towards a model similar to those implemented in the United Kingdom, the Netherlands, Austria and Finland, which require the employment office to offer formal education or apprenticeships to youth not in employment, education or training, at least until the age of 18. Such measures could be combined with financial incentives given to employers for developing apprenticeship places which has proven to be efficient in Denmark (OECD 2012a; Westergaard-Nielsen and Rasmussen, 1999).

Training provided by the State Employment Agency[2]

Training-related ALMPs are the most commonly used strategy worldwide to reduce the risk of unemployment and increase the employability and earnings capacity of workers who are unskilled, transitioning from school to work, or simply transitioning through a period of unemployment. Labor market training is aimed at those who have already left the formal schooling system. The main objective of training is to increase the employability and productivity of participants. Training can also play an important role in combating skills shortages in specific sectors and occupations.

Publicly-supported labor market training usually acts through either direct provision (e.g., through public training institutes) or financial support (e.g., funding training costs and/or subsidizing trainees). In many countries, governments are focusing on addressing market failures in information and financing, while leaving more of the delivery to private providers. Training programs can be concerned with developing basic job readiness or have specific vocational skill content. They may be comprehensive in terms of their coverage or target specific groups such as the long term-unemployed, workers displaced in mass layoffs, or young people, often with special attention to school drop-outs.

In Latvia in 2011, 6.2 percent of registered unemployment stock attended training programs – more than in any other EU10 countries in the sample (Table 3). The number of participants in training programs increased from 1,500 in 2008 to 9,800 in 2010 and 9,200 in 2011. This reflects a shift in emphasis from a "work-first" approach to a "train-first approach" through training and work-experience programs.

[2] Training measures include the following: (i) institutional training (cat. 2.1) covers measures where most of the training time (75 percent or more) is spent in a training institution (school/college, training center or similar); (ii) workplace training (cat. 2.2) covers measures where most of the training time (75 percent or more) is spent in the workplace; (iii) alternate training (cat. 2.3) covers measures where the training time is evenly split between a training institution and the workplace; (iv) special support for apprenticeship (cat 2.4) covers measures providing special support for apprenticeship schemes through: incentives to employers to recruit apprentices, or training allowances for particular disadvantaged groups. (EC/Eurostat 2006).

Table 3: Training Programs in Selected EU Countries

	Participated in training programs				Year	Annual average stock of registered unemp-loyed	Average costs per one partici-pant, Euro	Partici-pants in training programs, % of total registered unemp-loyed
	2011	2010	2009	2008				
Bulgaria	2,721	4,694	6,145	8,195	2011	332,921	3113	0.8
Czech R.	…	…	…	4,773	2008	325575	2277	1.5
Denmark	…	79,305	64,906	61,354	2010	206522	12343	38.4
Germany	658,651	774,309	799,139	755,048	2011	5,207,567	10214	12.6
Estonia	2,704	1,451	2,657	1,025	2011	53,220	5503	5.1
Latvia	9,154	9,849	4,856	1,483	2011	147401	3145	6.2
Lithuania	…	3,619	5,357	4,048	2010	369,219	5554	1.0
Hungary	…	18,681	13,548	16,424	2010	562,664	2575	3.3
Poland	…	17,419	18,794	106,527	2010	1,964,895	7386	0.9
Romania	15,468	9,841	9,990	24,244	2011	908,337	391	1.7
Slovakia	…	1,348	943	1,156	2010	398,138	2678	0.3
Slovenia	5,911	9,560	33,517	3,421	2011	110,692	4845	5.4
Sweden	18,706	15,492	9,620	10,012	2011	679,020	17518	2.3
United Kingdom	…	…	…	21,735	2008	1,021,545	13422	2.1

Source: Eurostat online

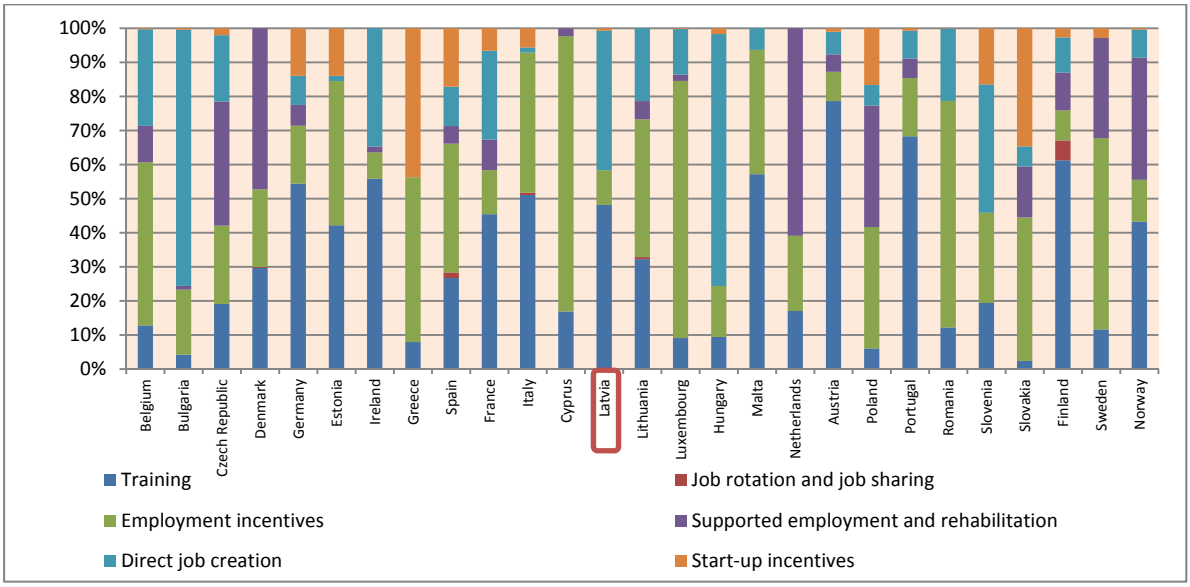
Expenditures on training programs provided by the State Employment Agency increased from 6.5 million euro in 2008 to 44.4 million in 2010, or almost 7-fold, largely due to allocations from the European Social Fund. In 2011, 43 percent of ALMPs went to training, while the rest was split between direct job creation (39 percent) and employment incentives (17 percent) (Table 4; Figure 1).

Table 4: Expenditure by Labor Market Policy Interventions in Latvia, Millions of Euro

	2008	2009	2010	2011
Training (Cat.2)	6.53	27.50	44.39	28.69
Employment incentives (Cat.4)	5.92	6.45	9.38	11.62
Direct job creation (Cat.6)	4.23	16.24	37.75	26.00
Labor market policy measures - total (Cat.2-7)	18.03	50.46	92.14	66.99

Source: Eurostat online

Figure 1: Composition of Spending on Active Labor Market Policies, 2010



Source: Eurostat, World Bank staff calculations; in World Bank 2013.

Training programs do have their limitations. First, they are relatively costly. By Eurostat data, an average cost of training programs per one participant in Latvia exceeded EUR 3,000. Second, their impact will be limited when job opportunities for trained workers are scarce. If there are limited vacancies in the labor market, participants change from being untrained to being the trained unemployed, further increasing their frustration. Among the selected EU countries, Latvia had the lowest job vacancy rate (2012Q3) which may affect training outcomes (Annex Table 8). Finally, training programs are also associated with deadweight losses (i.e., some workers would have found jobs without the training). In addition, labor market-related training organized or supported by PES cannot substitute for general education and cannot make up for the failings of the educational system.

Training programs provided by PES include measures such as classroom training, on-the-job training, and apprenticeships, and provide either general education (e.g., alternative high school certification, language skills, or computer skills) or specific vocational skills (firm- or industry-specific skills) for unemployed workers outside the education and training system. Some programs are designed to develop basic job readiness only. The structure of labor market training programs supported by the Latvian State Employment Agency (SEA) is presented in Table 5.

Table 5: Labor Market Training Programs Supported by the Latvian State Employment Agency in 2008-2012, 1000'

	2008	2009	2010	2011	2012*
Training for unemployed, and training for unemployed with voucher method (since 2011)					
Entrants[3]	1.9	9.7	7.6	8.6	3.6
Exits	1.9	6.2	10.7	4.9	4.8
Employer provided training					
Entrants	0.1	0.4	1.1	1.0	0.0
Exits	0.0	0.3	0.3	1.1	0.4
Informal education programs**					
Entrants	6.5	19.3	42.7	26.3	9.1
Exits	5.7	17.7	37.4	25.4	11.8
Other training programs***					
Entrants	0.2	3.6	8.6	11.1	1.1
Exits	0.1	0.4	6.2	11.0	5.9
Measures to improve competitiveness****					
Entrants	74.7	189.4	182.0	146.4	103.8
Exits	74.7	189.4	182.0	146.4	103.8

Notes: Participations are defined as participations per unemployment spell (i.e., an individual with 2 unemployment spells and program participation in each spell are double counted)
*-8 months
** - language courses, computer training, drivers' courses, etc.
***- e-training for disabled or persons after maternity leave, enhancing professional skills, further professional training and professional higher education programs, lifelong learning programs
****- PES-provided short training courses, seminars, lectures (5-36 hours) and individual consultations offered to unemployed in areas such as CV writing, job-finding and interview skills, communications skills, networking, negotiation skills, etc.[4]

Source: Latvian State Employment Agency

Training vouchers

Starting from 2011, the Latvian SEA is using training vouchers as the main training tool. The number of vouchers/beneficiaries are set by a SEA commission for each SEA affiliate (based on the number of unemployed).

The personalized training voucher is a flexible tool to match the training as precisely as possible to the individual needs of the job-seeker. The personalized training voucher allows the unemployed take more specific training in specialties where the demand for training is not very high. The training vouchers can be used to choose a course offered by training providers approved by the SEA.

[3] Entrants refers to the number of participants that join or start on the intervention during the year - i.e. the inflow or new starts. Exits refers to the number of participants that leave the intervention during the year - i.e. the outflow.
[4] By EC/Eurostat, short courses that only develop a person's ability to get a job - e.g. counseling in job application methods or interview techniques - should be considered as a form of job-search assistance (category 1). (EC/Eurostat 2006).

Many countries are using training vouchers in provision of labor market training. Over the past 40 years, the United States has operated a number of targeted training programs, some of which have used vouchers and voucher-like instruments to let participants determine their programs. The evidence from the U.S. experience indicates that although vouchers permit maximum consumer choice and reduce the need for government oversight, vouchers may not lead to optimal results due to imperfect information and a divergence between government and participant goals (See Barnow 2009 for detailed discussions).

Although vouchers are generally popular with participants, evaluations of U.S. training programs for poor workers and dislocated (displaced) workers show mixed results: many studies indicate that the impact of programs with vouchers is often lower than for programs without vouchers for poor participants, and the evidence is mixed for dislocated workers. When vouchers are used, appropriate counseling and assessment as well as the provision of provider performance information can improve the results.

A number of restrictions could be placed on the vouchers:

- The vouchers could be restricted to vendors that meet certain criteria in terms of quality of training (e. g., curriculum used or placement rates).
- The vouchers could be restricted to particular occupations (e. g., occupations with strong current or projected demand and/or with high wages).
- The vouchers could be restricted to occupations for which the participant has shown appropriate aptitude and interest through the assessment.
- The vouchers could be restricted in how much tuition they cover.

There are some types of training where vouchers are not feasible, for example, when services are directly provided by the government and there is no choice in vendors. In addition to direct provision of training, vouchers are also inappropriate as a tool for employer-provided training. For direct provision, efficiency can be encouraged through the use of competition or performance incentive systems. The success of a training program with vouchers may depend critically on the nature of the vouchers as well as the extent to which the program merely hands out voucher certificates to those who are eligible, as opposed to providing the participants with labor market information and data on the effectiveness of potential vendors. Also important is the degree to which the program provides assessment and career guidance to participants. Provision of information and guidance may be particularly important for some of the more disadvantaged populations served by the programs.

Economists tend to favor vouchers over direct provision of training because vouchers maximize consumer choice. If consumers can select the training program they value most, it will generally maximize consumer utility and social welfare. Another potential advantage of vouchers is that they simplify the training process. Instead of a government agency trying to determine the most appropriate training program for a participant and arranging for the training, in the extreme case all the agency needs to do is provide the participant with a voucher and perhaps a list of acceptable training programs. Vouchers may also improve the performance of training organizations. By forcing training organizations to compete for participants, inefficient providers should be driven from the market, resulting in survival of the fittest.

A potential problem with consumer choice is that participants in training programs may lack information about the labor market prospects for particular occupations or the success of specific training vendors with participants. Note that there are three different types of potential information failure here: (i) participants may lack labor market information about occupations in demand and wages that are paid; (ii) they may lack information about how successful various vendors are in placing their participants; or (iii) they may misperceive their capabilities for various occupations and training programs. The first two information failures can be dealt with by providing information to the participants, but the third requires an assessment of aptitudes and interests as well as guidance to the participants.

The empirical evidence on vouchers for targeted training programs from the USA suggests that vouchers lead to smaller earnings gains than a more prescriptive approach. All the voucher programs (as well as other programs) that have positive impacts include assessment, counseling, and screening of vendors. The evidence indicates that vouchers alone are insufficient to guarantee that training programs are effective.

Austria has several voucher schemes operated by the individual federal states and the chambers of labor. Funding levels vary. In the Tyrol, vouchers can be worth up to €500, with 25 percent of costs provided by the government. The State Training Account in Upper Austria provides bonuses and member discounts for employed learners and 80 percent of the costs for special target groups (low-skilled workers, workers aged over 40 and women returning to the labor market). About 20,000 participants from the Upper Austrian Training Account have been funded each year.

Personalized training vouchers were introduced in October 2009 in Estonia as well as a parallel option to procured training. However, vouchers are not awarded for management training, general social skills or qualities training. During one job-seeking period a customer can use up to EUR 2,500 worth of personalized training vouchers (until 31 July 2011 the ceiling was EUR 959).

In this country, on the whole voucher-based training tends to influence employment more than procured training. Six months after finishing training employment in the group that used training vouchers is almost 12 percent higher than in the control group, whereas the impact on employment in the group participating in procured training is close to 6 percent. A year after training the share of people in employment is nearly 14 percentage points higher in both treatment groups than in their control groups.

From the second month after training voucher-based trainings also show a statistically significant positive impact on income, which increases over the months. Six months after voucher-based training the treatment group earns almost EUR 107 (63 percent) more than the control group (combined impact of differences in employment and wages). Over the months the group that finished procured training earns about EUR 20 more than their control group (Lauringson et al 2011).

On-the-Job Training (OJT)

A small portion of labor market training in Latvia is provided by employers which can provide the more advanced job-specific technical and vocational skills. A number of studies observe that on-the-job training and employer involvement and sponsorship are associated with more positive outcomes

than classroom training and programs that do not have connections to the private sector. OJT is an important channel through which workers upgrade skills and remain competitive in the labor market, and firms are able to adopt new technologies and innovate. In fact, continuous training for new technologies (including new organization and business processes) can be best accomplished by workplace training rather than by more general purpose education if workers have a sufficient general foundation to be able to learn new skills at a little cost.

Pure on-the job training allows for the direct transition from school to work - generally leading to better pay in the short run compared to participation in qualifying training programs in a first stage. However, as the acquisition of skills is restricted to learning on the job and done without certification, this type of learning is likely to be of less value when moving jobs (Biavaschi et al 2012). Due to the lack of general occupation skills, employability is more limited entailing a higher risk of ending up in a vulnerable labor market position.

In Latvia, as far as on-the-job training is concerned, employers themselves choose the participants, and more motivated jobseekers with higher educational and vocational background might enter the programs first. The companies where the training at employers is carried out are chosen by commissions at SEA affiliate level (consisting of representatives of SEA, Labor Inspectorate, local trade unions, and employers).

Language courses, computer training, drivers' courses, and other PES-provided programs

Quite a significant portion of training programs in Latvia are informal education programs, such as language courses, computer training, and drivers' courses. The data on the impact of relevant training are scant but from the experience of Estonia it is known that language courses had a positive impact on the employment and income of those who finished training in 2010 (Lauringson et al 2011).

Furthermore, training programs often focus on short term job-seeking competencies of the unemployed. Training can be explicitly in job search techniques, along with career counseling and vocational guidance, or directed at specific occupational skills.

Virtual enterprises

There are other types of labor market training programs that might deserve attention. One of the new cost-effective forms of training, especially for youth, is virtual enterprises (a practice firm or simulation models of a business enterprise). The aim is to improve interactive learning, obtain and develop business skills for work in operating a real enterprise, and introduce jobseekers and students to the day-to-day business life and labor market realities (Kuddo 2009).

A practice firm is a virtual company and a center of vocational learning that runs like a "real" business silhouetting a "real" firm's business procedures, products, and services. Each practice firm trades with other practice firms. It provides a transparent view of internal business processes, external business relationships, and other business practices. [5]

[5] See: http://cms.europen.info/.

European - PEN International is the worldwide practice firms' network which consists of over 7,800 practice enterprises located in schools, colleges, universities, vocational training institutions, companies and training centers in 42 countries around the world, offering cutting-edge practical training to more than 230,000 people of all ages every year. Romania has 1,017 virtual enterprises, Slovak Republic, 818; Austria, 1,215; Germany, 555; Slovenia, 189; Bulgaria, 71; Lithuania, 46; USA, 304; Czech Republic, 734; Netherlands, 334, and Poland, 35 virtual enterprises.

In some countries, such as in Austria, the virtual firm as a place of learning is a compulsory part of the curriculum in all schools and academies of business, and is recommended for business training in all schools. A virtual enterprise is basically a software/training program simulating a small business, including its financial management, bookkeeping, accounting, marketing, sales and purchases, human resources, taxation, etc. Since it enables a direct connection between the theory and practice following the principle of learning-by-doing, it is the optimal method of business education and training.

But it is not always the case that virtual enterprises are integrated in the school system. The accumulated experience demonstrates that they can be aimed at the unemployed and located at the public employment services, training centers, enterprises, etc.

Box 1: Estonian INNOACT – labor market activation through innovation

A PES study conducted by the European Commission suggests, as a best practice, an experience from Estonia in providing employers with the skills they need. In this country, PES facilitated a study of employer skills needs and then referred unemployed people to specific training provisions designed to meet the employer needs (EC 2009).

Employers in the metals sector in the three counties were surveyed to identify their recruitment and skills needs over the short- to medium-term. The problem of, in particular, small-scale employers not really understanding their future skills and training needs was overcome by engaging a retired and well-respected figure in the Engineering Federation to work with employers to identify their needs. This also helped with disclosure and overcoming problems of trust. The responses were used to identify detailed training needs for the sector, including down to the level of skills required and the most respected provider of relevant training.
Unemployed jobseekers were selected to participate in training with tests to identify existing skill levels and suitability for the training provided, i.e. the tests were used to identify specific levels of training required. The Estonian Labor Market Board provided testing of candidate jobseekers, careers advice and guidance and matching of candidates to training provision.

The target was to achieve 60 percent beneficiaries finding employment. In fact, this was exceeded easily. Of the 400 beneficiaries of the program only 20-30 remained unemployed after participating in the project.

Priority rules for participation in training

Usually there is a mismatch between the huge demand for training among jobseekers and the number of training courses financed by PES. The Latvian SEA is utilizing the principle "first come – first served", e.g., the waiting list is based on the order of registration to participate in the program.

Some countries have established priority rules for participation in training. For example, in Russia, the following groups have priority to undergo training, retraining, and advanced training: the disabled unemployed, unemployed who have surpassed the six-month period of unemployment, jobseekers discharged from military service, spouses of military service members, and graduates of educational institutions, as well as first-time jobseekers (previously not employed) and non-professionals (without specialty).

Incentives for training providers

In some countries (Bulgaria), in order to improve the outcome of training programs, local organizations proposing training programs must show evidence of demand for trained workers and agree to a negotiated job placement rate which may be different for institutional training and for on-the-job training provided by the employer. Contracts are increasingly performance-based (e.g., the payment schedule is adjusted accordingly to meet the employment targets after completion of the program). Indeed, experience from Turkey confirms that performance-based contracting can be an effective incentive to ensure that training meets the needs of the labor market. The analysis suggests that placement rates are 20 points higher when providers must meet employment guarantees than when these guarantees do not exist (World Bank 2010a).

In Latvia, if the employer does not keep the unemployed in the job at least for six months, as indicated in the training contracts (except for misconduct), then he has to pay back to the Government the money spent. In the new contract payment system yet to be implemented, performance-based principles will be used.

In Latvia, all training programs are contracted out. In 2012, private educational establishments provided 66 percent of the training, and the share of state financed educational establishments was 34 percent.

Penalties for not attending the training course

Employment legislation may establish penalties for those not regularly attending the training course. For example, in Belarus, the size of the stipend may be reduced by 25 percent for one month or a trainee may be deprived of the stipend for the same period due to irregular attendance, without good reason, or breach of discipline and internal regulations of the educational establishment. In Russia, stipends may be reduced by 25 percent for one month, or payment may be suspended for up to one month in the case of absence or irregular attendance without good reason. By the Latvian "Support for Unemployed Persons and Persons Seeking Employment Law", the basis for the loss of unemployed person status shall be failure to fulfill the duties of an unemployed person without a justified reason.

In Latvia, unemployed individuals who do not attend the training without justification have to reimburse to the Government the training costs (stipend of LVL 70 per month). However, the training provider will be reimbursed for the time the unemployed has participated in the training, so he will not lose all the incentives to keep the unemployed in the training course. Another issue is that some people leave the training or do not take it up since their households would lose GMI benefit due to the fact that the stipend is taken into account in the income test.

Skills certification systems

One important aspect of a strategy to facilitate and promote the acquisition of job-relevant skills involves a framework for workers and firms to have clear information on those skills and on acceptable standards. Skills certification has become important to employers as a quality assurance mechanism that recognizes and certifies an individual's skills and competencies. Employers often report that the existing process of certification is not relevant to their needs; they often find that job candidates with certification in a particular occupational skill are in fact not competent in that skill (World Bank 2010b).

Skills certification is often referred to as competency based certification. As modes and pathways of learning become more diverse, skills certification fulfills many objectives. First, it recognizes skills and competencies regardless of the way in which they were acquired or of the job-seekers' educational background. Second, it allows employers to compare individuals' skills across the labor market. Third, it is a way to match the skills acquired through training or other means with the skills required to perform a job. Fourth, its less immediate objectives are to increase occupational mobility, promote lifelong learning, and enable international and intergenerational comparative analysis. Often, skills certification can be organized in a national qualification framework, which defines a single set of criteria for specified levels of learning and thus increases transparency and eases recognition of qualifications by labor market participants.

Information

Current and accessible information about the labor market is key for students and jobseekers and for education and training institutions. Students, in particular, need information about the employment outlook for different educational and occupational groups. Every young person must decide what education to acquire before entering the job market and which occupation to choose. Ideally, this decision should be based on objective information. Labor market information is also critical to educational and training institutions. These institutions need to be familiar with the trends in occupational demand to be responsive to the needs of the labor market. They also need to know what specific skills employers require. Then they can use this information to shape their curricula and training offerings. It is also important for educational and training institutions to collect and publicize the job status of their graduates (Rutkowski 2011).

In addition to good general labor market information, there exist several other statistical instruments, including employer-based surveys of current and projected labor market conditions. Such surveys are focusing on actual and planned job creation and job destruction, and on key determinants of hiring and firing. The objective of such surveys would be to determine the degree of labor market flexibility, and to prepare projections on changes in employment and unemployment. A tracer survey of displaced workers would trace changes in labor market status (earnings, employment compared to unemployment, career developments), depending on the educational status of workers or unemployed individuals. Another approach would be to keep track of graduates from some years after graduation, as part of labor market monitoring.

Medium-term employment forecast for Latvia

The involvement of PES in labor market education and training mainly focuses on the supply side of the labor market. Though PES increasingly provide and use labor market information, it remains a challenge for PES to ensure that the information provided in fact reflects current and future skills needs of the labor market. Employers can play a key role in ensuring that such information reflects current labor market needs, while PES need more highly qualified staff to ensure that the labor market information also includes the long-term needs of the labor market.

Medium-term forecast on skills supply and demand in Europe is provided by CEDEFOP according to which primary sector and utilities, manufacturing, construction and non-marketed services are expected to be the declining sectors, while distribution and transport, and business and other services are the expanding sectors (CEDEFOP 2010). By major occupation groups, the growth in employment is expected among legislators, senior officials and managers, technicians and associate professionals, clerks, service workers and shop and market sales workers while among other groups of workers the employment is expected to decline. Results show a considerable shift in labor demand towards skilled workers implying that future jobs will become more knowledge- and skills-intensive. In particular, by qualification levels, the demand is expected to plunge among workers with low qualification and workers with medium qualification levels while the demand for high qualification workers will surge.

Assessment of training programs

Different impact evaluations of training programs have produced both positive as well as negative results (Betcherman et al 2004, Kluve 2006, Betcherman et al 2007, Lehman and Kluve 2008, Card et al 2009). However, the majority of impact evaluations of training programs show positive impacts.

According to the new evaluation studies, labor market outcomes are significantly affected by the type of training. On-the-job training programs show favorable effects for many industrialized countries (Australia, Belgium, Great Britain, and Sweden), while programs only with classroom training tended not to have positive effects on employment and earnings in many cases (Australia, Belgium, Germany, and Switzerland). The effects on employment probabilities also differ in terms of the training content. Studies also highlight the value of linking training with formal qualifications.

The effects of training programs on employment for transition economies are almost always positive. This is consistent with earlier evaluations in transition countries that showed moderate but positive impacts (Fretwell et al., 1999). Evaluations in Bulgaria, Poland, and Slovakia all conclude that there is a significantly positive short-run effect from training on the probability of leaving unemployment for both men and women; however, when medium and long-term effects are analyzed, only women show positive effects (Poland and Slovakia). In Romania and FYR Macedonia, evaluations concluded that impacts on both employment and earnings were positive. Training programs in transition countries also seem to be more cost-effective. Also while training programs are less effective at increasing employment in the short term than job search or wage subsidies, they have positive effects over longer time periods, provided that they are well designed.

There are several reasons to believe that the cost-benefit balance for offering training to job seekers typically will be higher in a recession than when the labor market is less slack. In particular, the

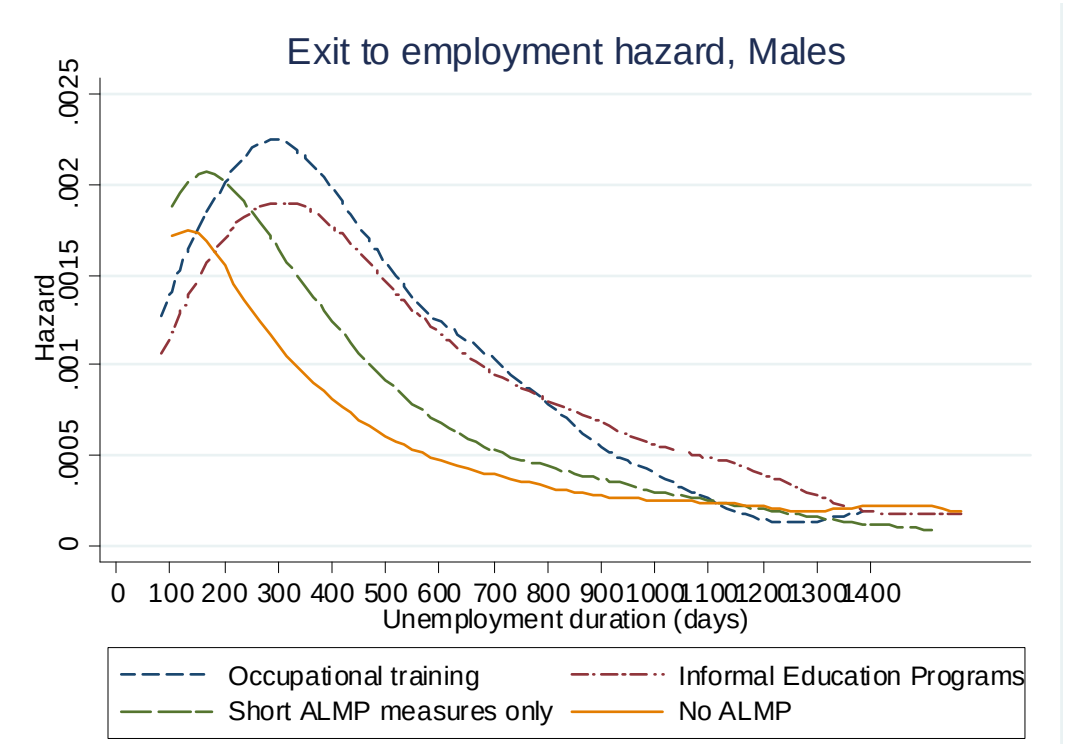
opportunity cost of the time required to train (the "locking-in effect") is lower in a period when job vacancies are fewer and unemployment durations longer.[6] A second reason why it may be useful to expand training in recessions is that economic downturns appear to be associated with accelerations of structural change, implying that an unusually large number of job losers may need to change industry or occupation to become re-employed and, hence, may be likely to benefit from training. All of these arguments suggest that it may also be desirable to place somewhat greater emphasis on more general training or longer forms of training during recessions.

An assessment of the impact of training programs on job placements was recently conducted in Latvia by Hazans and Dmitrijeva (2013). Figure 2 shows that males who underwent occupational training outperform non-participants (respectively, participants in short term measures) after 4 (respectively, 6-7) months of unemployment, while those who completed informal education programs outperform non-participants (respectively, participants in short term measures) after 6 (respectively, 9) months. Results for females are similar. Figure 3 shows that when training time is excluded from the duration of unemployment (as is often done in the literature), the positive impact of training and informal education programs on outflows to employment shows up without any delay.

These findings suggest that while short measures to improve competitiveness of the unemployed are useful, they cannot substitute training and education, especially in the longer term. This claim stands true also when characteristics of the unemployed are accounted for.

[6] The locking-in effects refer to the period a person participates in a program. During this period, jobsearch intensity may lower, because there is less time to search for a job, and also because the individual might want to complete, for example, an ongoing skill-enhancing activity (Calmfors 1994; Lalive et al. 2001).

Figure 2. Exit to Employment Hazard by Time Since Registration at SEA



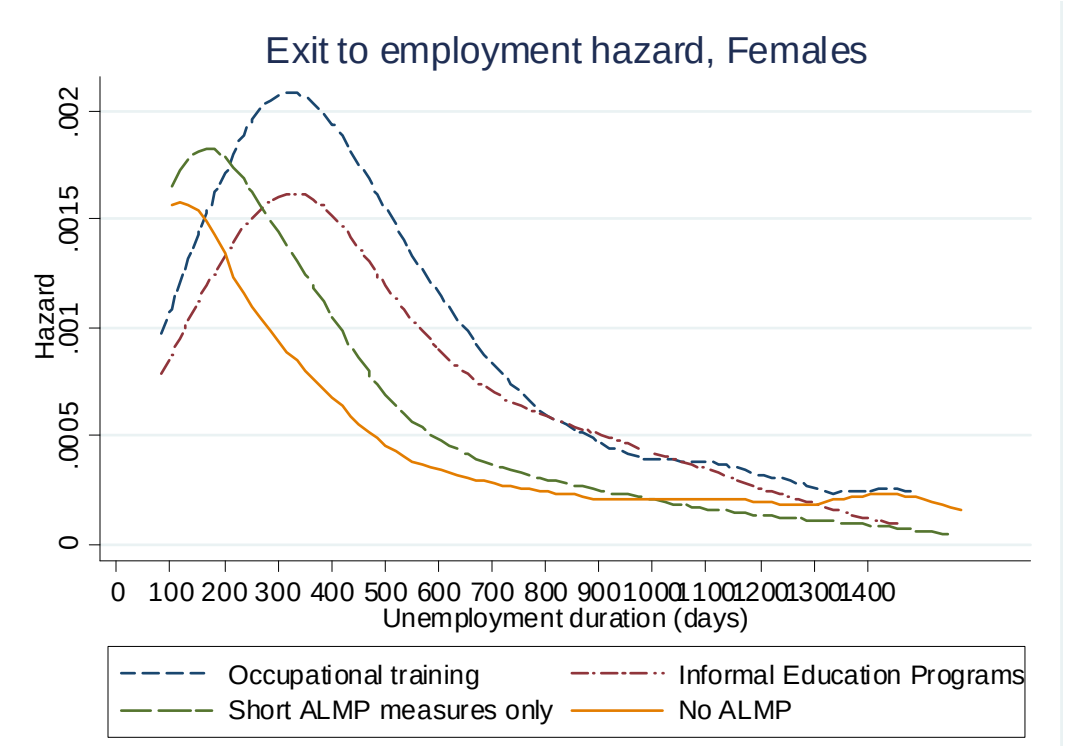
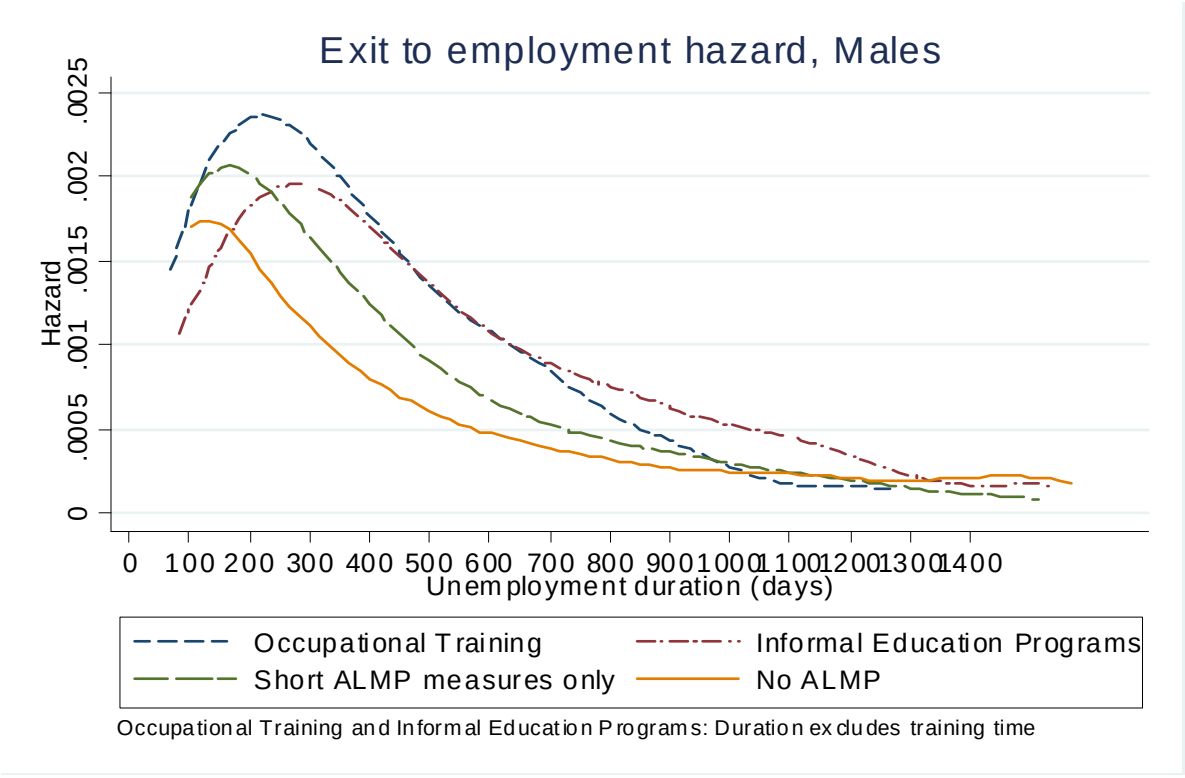
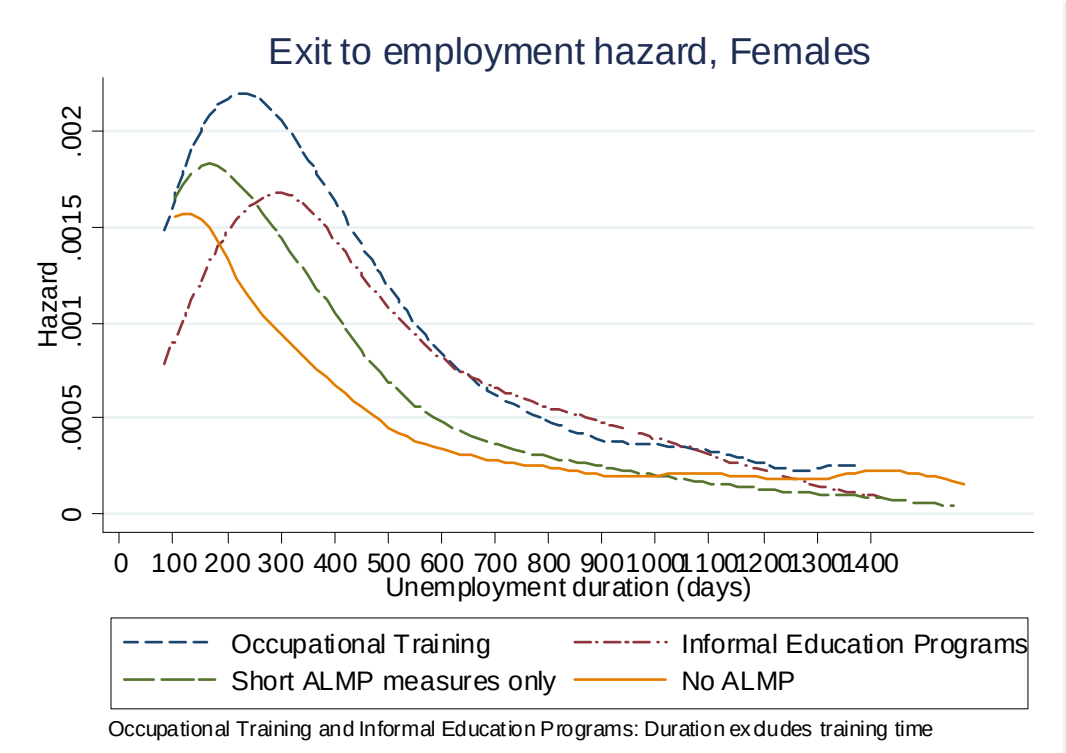


Figure 3: Exit to Employment Hazard by Unemployment Duration Excluding Training Time (if any)





Employment incentives[7]

Interventions to create jobs through employment incentives are controversial since they can have significant costs and uncertain benefits, especially beyond the short term. One of such measures are wage subsidies, for instance, subsidies to encourage employers to hire new workers or to keep employees who might otherwise have been laid-off for business reasons. Wage subsidies provide a financial incentive to eligible employers when considering the employment of vulnerable job seekers with barriers to employment. Wage subsidies also aim to increase the competitiveness of job seekers.

The basic idea behind (employer-side) wage subsidies is to reduce the costs to employers of employing the targeted group of workers thereby stimulating demand for these workers and raising their employment rates and earnings.

By bringing down wage costs, wage subsidies reduce the gap between the wages employees are willing to accept and what employers are prepared to pay. As a demand-side measure, they have no direct effect on the take-home pay of employees but instead aim at increasing their chances of finding or keeping a job at prevailing wage levels.

Financial incentives are either provided directly (through direct wage subsidies) or indirectly (through social security waivers and reductions in labor taxes). France, for example, has reduced employer social security contributions for firms with less than 10 employees hiring new low-wage workers in 2009. Spain has reduced employer social contributions for the first two years of employment for unemployed people with children who transit to full-time permanent contracts. The Slovak Republic has introduced a temporary exemption from health insurance payments for up to 24 months for persons entering self-employment after a period of three months on the job seekers register (Robalino and Banerji 2009).

Thereby, the level and duration of these subsidies can vary significantly. Subsidies are typically targeted at particular groups, such as the long-term unemployed, and in a growing number of industrialized countries, subsidies are being offered directly to welfare recipients in order to encourage them to work. Employer-based subsidies can cost less and have a larger social impact if targeted to individuals with lower pay.

In addition to this labor supply effect, subsidy programs are seen as compensating employers for their screening, orientation, and initial training costs with the expectation that the employee's productivity will have increased enough by the time the subsidy period is over for the firm to continue the employment relationship. There also is a particularly strong social element to these programs even if there is no net employment gain (Martin 2000). Subsidies are a relatively

[7] Employment incentives (category 4) covers measures that facilitate the recruitment of unemployed persons and other target groups, or help to ensure the continued employment of persons at risk of involuntary job loss. Employment incentives refer to subsidies for open market jobs which might exist or be created without the public subsidy and which will hopefully be sustainable after the end of the subsidy period. With employment incentives the public money represents a contribution to the labor costs of the person employed and, typically, the majority of the labor costs are still covered by the employer. However, this does not preclude cases where all costs are covered by the public money for a limited period. (EC/Eurostat 2006).

straightforward way to get long-term unemployed or disadvantaged workers into the labor market, and governments sometimes use this instrument even if the job lasts only for a limited period of time (and perhaps at the expense of unsubsidized workers).

As noted by the SEA (2013), the best practices in implementing wage subsidies emphasize the following basic principles:

- wage subsidies should be targeted to the most disadvantaged jobseekers who otherwise would experience difficulties in entering the labor market, such as persons with disabilities;
- wage subsidies should avoid substitution effects, e.g., a worker hired in a subsidized job should not replace an unsubsidized worker;
- wage subsidies would be paid for a limited period of time;
- the amount of the wage subsidy should be also limited being around or below the minimum wage threshold;
- the employer should cofinance the beneficiary's salary so that at least a statutory minimum wage should be guaranteed;
- the amount of the wage subsidy should be gradually reduced, so that the employer should pay the higher share of cofinancing over time;
- the ultimate objective of the wage subsidy is to provide the job seeker an opportunity to obtain permanent job.

Wage subsidy programs can be scaled up relatively rapidly, making them particularly prominent during times of economic crises to temporarily sustain jobs and avoid layoffs. These programs typically are targeted at the long-term unemployed, areas/sectors with high unemployment, and special groups of workers (e.g., youth, disabled workers) to integrate them into real workplaces (ideally with some training) and, thus, providing a point of entrance into the labor market.

Wage subsidies can be administered in a number of different ways. They may operate as standalone measures or are closely integrated with other measures, such as training, public employment programs or other active labor market policies (OECD, 2003). Policies using an intermediary (a public employment agency, nonprofit training organization, etc.) that combine job development, job search assistance, training, and wage (or employment) subsidies appear more successful for targeting on specific disadvantaged groups.

If programs are to have real net positive impacts, it is important to target carefully and to monitor employers to reduce substitution and deadweight effects. However, Martin (2000) points out that this involves a tradeoff in that intense monitoring and tight targeting conditions may make the program unattractive for employers and thus reduce the take-up rate.

Box 2: Wage Subsidy Programs in Denmark and Sweden

Denmark's Flexjobs: subsidized jobs for the long-term disabled (permanent disability). Depending on the seriousness of the disability and the person's ability to work, the subsidy may cover one-third, one-half or two-thirds of the minimum wage, for an unlimited duration. The disabled persons assisted must necessarily have completed vocational rehabilitation and are eligible if the competent authorities decide they cannot occupy "normal" or make-work jobs. Flexjobs are necessarily full-time positions and cannot be combined with receipt of disability benefits.

Sweden's flexible wage-subsidy scheme to promote recruitment of the disabled: subsidy covers up to 80 percent of wage costs (and on average 60 percent). The subsidy can also vary over time, depending on changes in health status. Eligibility is assessed on the basis on a medical certificate and the type of work that the person is to carry out. The subsidy is awarded for up to four years and is regularly re-adjusted. It can be resumed after three years in non-subsidized work.

Source: OECD 2003.

Wage subsidies can also be either general or categorical. Categorical subsidy (targeted wage subsidies) are paid on the employment or hiring of only certain specific categories of workers (e.g., economically disadvantaged youth, public assistance recipients, the disabled, dislocated workers, or the long-term unemployed). Targeted wage subsidies are often motivated by desires to affect the composition of employment and aim program benefits at specific groups of workers whose employment opportunities are viewed as particularly in need of improvement. But targeting on the basis of socio-demographic categories of which employers may have negative views may serve to stigmatize participating job-seekers and limit employer interest in the program.

In Latvia, the following targeted wage subsidies have been established:

- For on-the-job training with a declining subsidy (LVL 100; 80; 60) during a 6 months period;
- For youth workplaces – LVL 100 during the first 6 months and LVL 50 during the last 3 months (the employer supplements the remaining amount - at least up to the minimum wage);
- For the unemployed in unfavourable situation: subsidy for up to 12 months, and 50 percent of the wage but the amount of the subsidy cannot exceed two minimum wages;
- For the disabled: for 36 months, and the amount of the subsidy cannot be less than the monthly minimum wage (LVL 200).

Companies receiving wage subsidies are chosen by SEA (by commissions at SEA affiliate level).

The SEA (2013) has identified the following policy directions to improve wage subsidy arrangements: (i) implement differentiated wage subsidies, for example, depending on severity of the disability—to encourage employers to hire persons with more severe disabilities, as well as other vulnerable groups, such as long-term unemployed; (ii) gradually reduce wage subsidy over time; and (iii) implement profiling system to better target wage subsidy measures.

Wage subsidies can either operate nationally or be place-based programs with eligibility restricted to certain regions or local labor markets. Place-based targeting based on location of residence may be less stigmatizing than targeting on the basis of demographic groups.

In addition to employment effects, the benefit of the wage subsidy program is that first, it generates more tax and social security income, and second, there are less needs to spend funds on unemployment insurance.

While these programs serve a social objective, it is difficult to design subsidies that actually meet the goal of creating jobs in a cost-effective manner. They are often associated with deadweight losses. They also can have unintended effects such as subsidized workers replacing unsubsidized ones ("substitution" effect) or employers hiring subsidized workers and laying them off once the subsidy period ends. Another issue is that how to safeguard against displacement that is, how to ensure that the employer would not have filled the new work place in any event.[8]

Table 6: Participation in Employment Incentives' Programs in Selected EU Countries

	Number of beneficiaries				Year	Annual average stock of registered unemployed	Average costs per one participant Euro	Participants in employ-ment incentives programs, % of total registered unemp-loyed
	2011	2010	2009	2008				
Bulgaria	3,525	3,215	7,745	10,471	2011	332,921	1418	1.1
Czech R.	…	8,008	6,872	8,600	2010	531,037	9472	1.5
Denmark	…	45,768	30,798	22,887	2010	206522	16408	22.2
Germany	195,687	264,962	259,743	187,276	2011	5,207,567	7616	3.8
Estonia	2,685	4,147	65	55	2011	53,220	2510	5.1
Latvia	4,185	2,136	1,888	2,329	2011	147401	2777	2.8
Hungary	…	43,943	27,504	46,751	2010	562,664	1742	7.8
Poland	…	199,126	179,151	81,847	2010	1,964,895	3819	10.1
Romania	23,677	28,821	27,032	39,025	2011	908,337	651	2.6
Slovakia	…	28,163	13,324	9,479	2010	398,138	2288	7.1
Slovenia	4,429	5,179	2,570	599	2011	110,692	3247	4.0
Sweden	111,826	114,235	88,610	84,510	2011	679,020	15551	16.5
United Kingdom	…	…	38,152	40,224	2009	1,526,000	5338	2.5

Source: Eurostat online

[8] Deadweight Loss: Program outcomes are no different from what would have happened in the absence of the program. For example, wage subsidies place a worker in a firm that would have hired the worker in the absence of the subsidy.
Displacement Effect: This usually refers to displacement in the product market. A firm with subsidized workers increases output but displaces output among firms without subsidized workers.
Substitution Effect: A worker hired in a subsidized job is substituted for an unsubsidized worker who otherwise would have been hired. The net employment effect is thus zero.

Wage subsidies are costly labor market interventions and subsequently attract limited participation. In EU10 countries, in 2010, the highest ratio of recipients of wage subsidies compared to the average annual stock of registered jobseekers was 10 percent in Poland, followed by Hungary at 8 percent, and Slovakia at 7 percent. In Latvia in 2011, 4,200 individuals, or 2.8 percent of the average stock of registered unemployment participated in the program, with an average cost of US$2,800 per beneficiary (Table 7).

Box 3: Wage Subsidies in the New Deal Program in the UK

Starting from 1997, the program entitled "the New Deal for the Unemployed Youth" was launched which was targeted at all young people aged between 18 to 24 years old who had been claiming job seekers allowance/unemployed benefit for six months or more. From June 1998 all adults (25 or older) unemployed for over two years were also covered by the initiative. The program operates in the following way. After an initial "Gateway" period (see below), several policy options are presented to the unemployed. A key option is a voucher for a subsidy to a prospective employer if she hires the job seeker. A subsidy equal to £60 (U.S. $100 approximately) per week for 26 weeks is to be provided directly to an employer. The aim of the intervention is to enhance the employability of the long-term unemployed.

The employer must provide the equivalent of at least one day of education or training per week designed to reach an accredited qualification. A sum of £750 is available to meet these training costs paid in four installments.

Before these options are available to an individual, there is a 'Gateway' period lasting for up to four months. During this period the individual receives extensive help in job search. A specially trained "personal advisor" from the local Employment Service is assigned to the job seeker. They meet at least every two weeks and the personal advisor intensively counsels the job seeker on the best ways to improve their employability.

Failure to comply without good cause may result in benefit sanctions being applied. Sanctions are initially the withdrawal of benefits for two weeks. Further refusals will result in repeated four-weekly withdrawal of benefits. About 3 percent of New Dealers had sanctions applied in the first 6 months of the scheme.

There has been an expansion of New Deal provisions for different target groups. There are now New Deals for the Disabled, for Lone Parents, for the Partners of the Unemployed, for the Over 50s and even for Schools. These offer many of the same features which have been pioneered on the younger groups (employment subsidies, intensive job search help, training subsidies).

Against this, there are several hidden costs to the firm. Employees are given a day a week off for training and although the employer is compensated for this with the £750 payment, the disruption and costs may be significant (for example other co-workers will have to provide some on-the-job training). Furthermore, there are the costs of bureaucratic compliance including the government monitoring of training, employment conditions and assorted red tape. This may be part of the reason why take-up of the subsidized employment option has been surprisingly low.

Source: Almeida et al 2012; Bell et al 1999.

In Latvia, the beneficiaries of the wage subsidy program include long-term unemployed (out of job for at least 24 months); the unemployed who are older than 50 years; the disabled unemployed, etc.

Wage subsidies are provided from 12 months for up to 36 months for unemployed with disabilities. Wage subsidy equals 50 percent of the regular salary for particular job but not more than the national minimum wage. Based on the gross placement rates, the program seems to be quite efficient. In 2011, 1,272 individuals participated in the program, and 1,023 or 80 percent of them retained their jobs with the same employer (SEA 2013).

Targeting

Employment promotion legislation in many countries highlights the priority list of potential beneficiaries of wage subsidies. In Lithuania, the priority list includes 13 categories of jobseekers, including the disabled, first-time jobseekers, the long-term unemployed, persons over 50 years of age who are capable of work, pregnant women, etc. In Estonia, a wage subsidy may be paid for the employment of unemployed persons who have been released from prison, the long-term unemployed, and unemployed persons 16–24 years of age who have been registered as unemployed for more than six consecutive months and have not found work during that time (Kuddo 2012).

In other EU countries, the target group for wage subsidies includes: in Austria, long-term unemployed and older unemployed; in Bulgaria, young people (up to 29 years of age) with no work experience; in France, young people without work experience; in Hungary, particularly disadvantaged unemployed; in the Netherlands, unemployed persons with disabilities, etc. (SEA 2013).

Currently SEA is elaborating the system of profiling and classification of unemployed persons which will allow the better targeting of ALMPs, including wage subsidies. The system should start functioning in full scale by the end of 2013.

Direct targeting of disadvantaged workers may be effective in some cases, but also risks being counterproductive when it increases administrative burdens, reinforces negative stigma associated with disadvantaged groups and suffers from limited awareness among employers. In addition to take-up problems, employers may not want to hire employees who have been identified as facing particular barriers. If the subsidy is taken to signal low ability or job-readiness, it may in fact widen rather than close the perceived productivity gap (Immervoll and Pearson 2009).

In other cases, targeting may be achieved more effectively indirectly, for example, by placing ceilings on total firm or per worker subsidies. Ceilings on total subsidies per firm tend to favor small relative to large firms. A rationale for this form of targeting could be that small firms are more likely to be credit-constrained than large firms. Ceilings on subsidies per worker encourage low-skilled employment and part-time jobs (which might be considered a form of work-sharing).

Conditions on employers

Placing stricter conditions on employers may help to reduce displacement effects associated with hiring subsidies. For example, hiring subsidies may result in "churning" when target-group workers are only hired for the duration of the subsidy and then replaced by other target workers. Alternatively, there may be "revolving-door effects", which refer to the situation in which firms use subsidized hires to replace existing workers. One way hiring subsidies could be made more effective is by making subsidies proportional to *net* employment changes, instead of *gross* hiring, thereby at the

same time minimizing the kind of deadweight effects that typically tend to be associated with stock subsidies and the displacement effects associated with gross hiring subsidies.

There are limits in the size of the wage subsidy. For example, in Latvia and Estonia, the wage subsidy is 50 percent of the wage or salary of the employee or public servant but not more than the minimum monthly wage. In Lithuania, the wage subsidy may not exceed the minimum monthly wage. The most generous wage subsidy was found in Ukraine: wage subsidy (grant) may be paid to employers in the amount of his/her expenditures on wages but not above the average wage in the related field in the national economy (Kuddo 2012).

There might be time limits for the payment of the subsidy. In Lithuania, where fixed-term employment contracts are agreed with the employed persons, the period of payment of the subsidy may not be longer than three months.

Legislation might foresee the penalties for employers for early termination of the contract with subsidized workers. In Estonia, an employer must return a wage subsidy in full if the relevant employment or service relationship is terminated at the initiative of the employer earlier than one year after entry into the contract of employment or appointment to the position.

Evaluation results

Based on evaluations for wage and employment subsidies presented by Betcherman et al (2007), the overall picture remains unfavorable: 14 of the 21 evaluations with results on employment impacts conclude that the effect was either neutral or negative and only five of 11 evaluations with results on earnings find that the subsidies had a positive impact on earnings. The positive findings almost completely come from industrialized countries where some program evaluations do show net employment and/or earnings gain.

In his comprehensive survey of the US programs, Katz (1996) concludes that wage subsidies have been effective in improving the earnings and employment of disadvantaged groups, at least when combined with training elements. More recent evidence is available from Britain, where the so-called 'New Deal' system has led to modest improvements in the productivity of the target group (e.g. Blundell et al. 2004).

In Finland, in order to be eligible for the subsidy, the workers must be over 54 years of age, earn a salary between 900 and 2,000 euros per month and work full time. The subsidy depends on the wage level and may be up to 16 percent of the gross wage. The subsidy covers full-time workers who are employed at least 140 hours per month and whose wage is between 900 and 2,000 euros per month. The subsidy equals 44 per cent of the part of the monthly wages that exceeds 900 euros. The maximum subsidy per employee is 220 euros a month. The amount of the subsidy is reduced by 55 per cent of the monthly wages exceeding 1,600 euros. The results indicate that the subsidy system had no effects on the employment rate. However, it appears to have increased the probability of part-time workers obtaining full-time employment (Huttunen et al 2012).

The available evaluation evidence for wage subsidy programs in transition countries is almost always negative. The evaluation of wage subsidies in Poland is particularly unfavorable for males. In Slovakia, neither men nor women benefited from the subsidies. But in the Czech Republic, a wage

subsidy program has been in operation since1996, for the benefit of young people. It achieved a statistically significant increase in employment of 12 percent for participants. Women and less-educated participants (a considerable proportion of all participants) gained most from the program. Again, however, monthly earnings were lower than pre-program levels (Betcherman et al 2007).

In certain cases, it may be possible to enhance their effectiveness through careful targeting on disadvantaged groups and stricter conditions for employers. For example, on average, the Canadian Self-Sufficiency Project increased earnings by more than 20 percent over the control group. Because the rules of the program prohibited people from simultaneously receiving the earnings supplement and income assistance, the program reduced income assistance payments by about $3,500 per family in the treatment group (Michalopoulos *et. al.* 2002).

Some of the programs with positive results have other elements besides the wage subsidy and the evaluations do not isolate the specific effects of the subsidies. For example, the Public Employment Program in Germany also includes training and the New Deal Program in Great Britain also has job search assistance services. Where employment impacts are positive, the magnitude of the effect is often modest.

There is some new evidence of effective programs, when employers use the subsidy to screen future workers or when provided directly to individuals through an incentive system to work, at the risk of losing welfare benefits. However, all evaluations of this type of labor market intervention are beset by the challenges of factoring in deadweight and substitution effects that are especially relevant in the case of subsidies. Finally, as noted above, programs may be most effective when they combine the subsidy with other components such as training or job search assistance.

Conclusions and recommendations

In Latvia, although spending on active labor market programs has increased recently, there is a need for training programs to be enhanced further, given the high share of long-term unemployed and growing complaints about skill mismatch.

This note contains a number of recommendations for the government to consider as training programs are expanded:

- It may be useful to expand training given that the recent economic downturn appears to have led to accelerated structural change in the economy, implying that a large number of job losers may need to change industry or occupation in order to become re-employed and, hence, may be likely to benefit from training..
- A number of studies observe that on-the-job training and employer involvement and sponsorship are associated with more positive outcomes than classroom training and programs that do not have connections to the private sector.
- It is more beneficial to favor an intensive approach toward training, with higher cost per head, rather than an extensive approach that covers a large share of unemployed with low intensity (Meager, 2009; Martin and Grubb, 2001).
- Potential participants in training programs should be provided with labor market information, including on the demand of particular professions/occupations, and the data on the effectiveness of potential programs/private providers. It could be beneficial if programs provide an assessment of aptitudes and interests, as well as career guidance to participants. The latter would be particularly important for the more disadvantaged populations served by the programs.
- Training by employers is currently a subsidy scheme where employers sign a contract that they will organize training. It would be advisable to implementing rules on how this training should be organized nor monitored.
- Promotion of pay-back clauses could reduce the risk of free-riding among firms. Post-training employment performance evaluation could be used as a tool to judge course quality. Thereby, the main requirement would be that after completion of the program the person is hired for at least six months on an open-ended or temporary contract. Otherwise, the employer has to pay back the money spent. In the new contract payment system yet to be implemented in Latvia, performance-based principles will be strengthened.
- The design of training courses should directly involve employers, for example through employers' organizations and employer surveys and, where appropriate, contacts with individual firms.

- Currently training is organized based on the waiting lists establishing the order for participation, e.g., the first who joins the waiting list is the first to be eligible to benefit from the program. For training by employers, the employers themselves choose the participants. As a result, participation in training might be biased towards the relatively well-educated and prime-age

unemployed who might be the most active in selecting the programs. Efficiency gains could be increased by better targeting programs to at-risk categories, i.e. youth, older workers, low educated, and long term unemployed. Thereby, it would be beneficial to establish a priority list for participation in training programs as well. Currently the SEA is elaborating the system of profiling and classification of unemployed persons. The system should start functioning in full by the end of 2013.

- As far as training outcomes are concerned, skills certification has become important to employers as a quality assurance mechanism that recognizes and certifies an individual's skills and competencies. In this context, devoting more resources to longer courses ending with professional examinations, or at least certification would contribute to improving skills matching.

- Targeting of wage subsidies may be achieved more effectively indirectly, for example, by placing ceilings on total firm or per worker subsidies. Ceilings on total subsidies per firm tend to favor small relative to large firms. A rationale for this form of targeting could be that small firms are more likely to be credit-constrained than large firms. Ceilings on subsidies per worker (currently at the level of the minimum wage) encourage low-skilled employment and part-time jobs (which might be considered a form of work-sharing).

- One way hiring subsidies could be made more effective is by making subsidies proportional to *net* employment changes, instead of *gross* hiring, thereby at the same time minimizing the kind of deadweight effects that typically tend to be associated with stock subsidies and the displacement effects associated with gross hiring subsidies. In Latvia, the legislative framework specifically prohibits substitution: the work place has to be newly created or has to be vacant for at least 4 months. It is however difficult to enforce the rule with employers who are sometimes changing the names of occupations and tasks.

- Latvia could take inspiration from recent experience in Belgium, Finland or Ireland, where subsidies were implemented for net hiring. The net hiring requirement tends to favor small firms that have a higher tendency to hire new employees than large firms. For instance, the schemes implemented in Belgium and Finland explicitly aim at helping small firms to grow by subsidizing the first and second employees (OECD, 2010b).

- SEA needs to build up professional labor market information services which include tools to assess structural imbalance between skills supply and demand to enable an early diagnosis of skill gaps. In addition to good general labor market information, several other statistical instruments could be explored, including employer-based surveys of current and projected labor market conditions, tracer surveys of displaced workers, or to keep track of graduates from some years after graduation, as part of labor market monitoring.

- Job vacancies represent a potentially rich source of information on skills demand. Unfortunately, SEA currently has only a limited access to the total vacancy market. Experience from EU member countries suggests a number of factors increase the quantity and quality of vacancy registrations. In addition to marketing services to employers to increase vacancy notifications, the employment service can register vacancies advertised elsewhere. Also, employment services need not be limited to longer-term jobs. Repeated temporary placements often lead to an offer of a permanent job.

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ANNEX 1: Background Data

Table 7: Latvia: GDP Growth Rate, Employment Rate, Unemployment Rate, Public Expenditure on Labor Market Programs, and Persons Registered with Public Employment Services (Annual Average Stock)

	2008	2009	2010	2011	2012
Real GDP growth rate*	-3.3	-17.7	-0.9	5.5	5.6
Employment rate**	75.8	67.1	65.0	66.3	…
Unemployment rate	8.0	18.2	19.8	16.2	14.0
Public expenditure on LMP, % of GDP (Cat.1-9)	0.482	1.344	1.246	0.891	…
Public expenditures on LMP measures, % of GDP (Cat.2-7).	0.079	0.272.	0.513	0.334	…
Public expenditures on LMP supports, % of GDP (Cat.8-9).	0.349	1.028	0.693	0.321	…
Public expenditures on LMP measures (Cat.2-7). Million EUR	18. 028	50.458	92.137	66.994	…
Public expenditures on LMP supports (Cat.8-9) Million EUR	79.931	190.307	124.494	64.358	…
Persons registered with PES: Annual average stock	56865	130447	177860	147401	…

*- Percentage change on previous year

**- The employment rate is calculated by dividing the number of persons aged 20 to 64 in employment by the total population of the same age group.

Source: Eurostat online

Table 8: Registered Unemployment, Job Vacancy Rate, Public Expenditure on Labor Market Policies, by Type of Action (% of GDP), and Activation-Support (LMP Participants per 100 Persons Wanting to Work; Categories 2-7) in 2010

	Persons registered with Public Employment Services (PES)	Job vacancy rate**, 2012Q3	Total LMP services (category 1), % of GDP	Total LMP measures (categories 2-7), % of GDP	Activation-Support (LMP participants per 100 persons wanting to work; categories 2-7)	Activation of registered unemployed, %
Belgium	564,464	2.6	0.218	1.262	95.5	…
Bulgaria	355,775	0.7	0.039	0.094	4.1	7.0
Czech R.	531,037	1.0	0.112	0.221	9.9	6.1
Denmark	206,522	…	0.379	1.400	50.7	25.2
Germany	5,758,892	2.3	0.378	0.563	30.0	17.9
Estonia	77,953	1.5	0.087	0.144	3.8	7.6
Ireland	441,689	0.7	0.168	0.736	25.2	13.4
Greece	576,620	…	0.011	0.219	12.4	13.7
Spain	5,499,846	0.7	0.126	0.680	47.6	…
France	3,943,342	…	0.303	0.830	44.9	…
Italy	…	…	0.029	0.350	21.4	…
Cyprus	30,620	0.4	0.036	0.256	19.0	…
Latvia	177,869	0.4	0.041	0.513	8.5	15.7
Lithuania	369,319	1.2	0.082	0.226	4.7	4.7
Luxembourg	14,409	0.8	0.052	0.419	62.4	47.5
Hungary	582,664	1.0	0.090	0.527	20.3	21.4
Malta	7,055	…	0.118	0.038	6.9	12.4
Netherlands	545,600	1.3	0.393	0.784	45.4	31.0
Austria	262,683	1.9	0.187	0.659	29.2	39.0
Poland	1,964,895	0.4	0.092	0.602	20.1	13.6
Portugal	645,322	0.4	0.114	0.579	28.7	23.2
Romania	711,348	0.6	0.028	0.028	3.2	6.0
Slovenia	100,504	0.9	0.109	0.345	15.9	15.3
Slovakia	398,138	0.8	0.100	0.233	21.2	23.0
Finland	504,238	1.7	0.132	0.864	27.1	19.9
Sweden	712,541	1.3	0.489	0.805	26.9	29.3
United Kingdom	1,473,040	1.8	0.346**	0.041**	1.5*	…

*- The job vacancy rate (JVR) measures the proportion of total posts that are vacant, according to the definition of job vacancy above, expressed as a percentage as follows: JVR = number of job vacancies / (number of occupied posts + number of job vacancies) * 100

**- 2009

Source: Eurostat online

Table 9: Resident Population of Latvia by Education Attainment and Age Group (Prime-Aged) on March 1, 2011; 1000'

	25-29	30-34	35-39	40-44	45-49	50-54
Higher education and doctorate	54.6	45.7	42.8	39.3	39.4	39.9
Vocational secondary education or professional education	30.8	32.2	47.6	59.5	65.2	64.3
General secondary education	31.3	31.5	33.7	34.0	36.4	39.9
Primary education and lower	32.2	25.4	18.5	8.5	7.0	9.0
Total	148.0	134.5	142.5	141.3	148.0	153.0

Source: Latvian Central Statistical Bureau online

Table 10: Number of Graduates of Labor Market Training Programs Supported by SEA

	Number of beneficiaries who entered training programs in 2012	Number of beneficiaries who finished training programs (of those who started in 2012)	Number of beneficiaries who finished training programs (those who started in 2012 and in 2011)
Vocational education, vocational upskilling educational programs, and higher education programs	8383	3158	6328
Informal education programs	14696	10601	14525
Employer provided training	8	5	459

Source: State Employment Agency

Table 11: Total Costs of Training Programs (and as a Ratio of Overall Costs of SEA (Categories 1-9, and 2-7)

	Number of beneficiaries who entered training programs in 2012	Total costs of training programs in 2012-including ESF and State budget financing (LVL)	Ratio of total expenditures of SEA in 2012
Vocational education, vocational upskilling educational programs, and higher education programs	8383	5529327	8,23%
Informal education programs	14696	5227023	7,78%
Employer provided training	8	243182	0.36%

Source: State Employment Agency

Table 12: Number of Participants of Training Programs by Program Type, Gender, and Other Characteristics

	Vocational education, vocational upskilling educational programs, and higher education programs	Informal education programs	Employer provided training
Total number of beneficiaries who entered training programs in 2012	8383	14696	8
Of which:			
Women	5640	8642	5
Men	2743	5996	3
Long term unemployed	3707	8640	1
Unemployed youth aged 15-24	1124	1140	5
Unemployed persons with disabilities	766	1378	1
Persons after prison	15	41	0
Persons after parental leave	178	122	1
Unemployed persons aged 50+	659	1591	0
Of which with (out of total):			
Higher education	1207	2390	1
Vocational education	3042	5668	4
General secondary education	2710	3999	1
Primary education	1402	2199	2
Lower than primary education	22	313	0

Source: State Employment Agency

ANNEX 2: Linking Employment Services to Groups with No/Unstable Work[9]

Table 13: Employment Services and Measures to Particular Groups

Target Groups	Relevant Employment Services and Measures
Individuals with unfavorable labor market prospects (see the list by some countries in Table 8)	Job search courses, job clubs, vocational guidance, counseling and monitoring, and sanctions in the case of noncompliance with job search requirements (see the potential list of employment services below)
Most job seekers, in particular, for participants with better labor market prospects and for women	Training, including classroom training, on-the-job training, apprenticeship and internship programs, and work experience. The measures can either provide a more general education (such as e.g. language courses, basic computer courses or other basic courses) or specific vocational skills (e.g. advanced computer courses or courses providing e.g. technical and manufacturing industry skills).
Long-term unemployed and more disadvantaged individuals; the disabled, first-time jobseekers, the long-term unemployed, persons over 50 years of age who are capable of work	Wage subsidies: financial incentives are either provided directly (through direct wage subsidies) or indirectly (through social security waivers and reductions in labor taxes).
A higher-skilled segment of the unemployed, and unemployed workers who have entrepreneurial skills, such as highly educated prime-aged men	Small business assistance programs, self-employment grants and sometimes also advisory support for a fixed period of time.
The most disadvantaged individuals	Direct employment programs in the public sector, focusing on the direct job creation and provision of public works or other activities that produce public goods or services.
Youth programs comprising specific programs for disadvantaged and unemployed youth	Training programs, wage subsidies and job search assistance; graduate practice for jobseekers up to 25 years of age, including reimbursement of the necessary personal expenses associated with the implementation of graduate practice; provision of employability and training plans, job and career counseling services, various aptitude tests, and vocational assessment tests; voluntary service with the aim of jobseekers to obtain practical experience on the job market, an allowance in a lump-sum amount of the subsistence minimum to cover necessary expenses for meals, accommodations, and travel expenses from place of residence or temporary residence to place of voluntary service.

[9] This section outlines the employment services and measures of relevance to the particular groups of out-of-work individuals identified in World Bank (2013). Profiling of People with No or Limited Labor-Market Attachment and of Low Income Who is unemployed or receiving welfare benefits in Latvia?

Target Groups	Relevant Employment Services and Measures
Measures for the disabled	Vocational rehabilitation, sheltered work programs or wage subsidies for individuals with physical, mental or social disabilities; an employment quota for the disabled, and in some countries, for other categories of workers. groups with limited work capacity, such as improving their jobsearch skills, subsidies to private employment, sheltered employment, or adaptation of the workplace and post-employment counseling; reimbursement to the employers and employees of the costs of health insurance and social insurance premiums and contributions to retirement pensions
Older job seekers	**Vocational rehabilitation, adaptation of working places, further training, retraining, and active employment services**
Long-term unemployed	A combination of temporary employment (public works or subsidized employment), on-the-job training, and regular job-placement assistance

Table 14: Special Target Groups of Jobseekers for Provision of Employment Services in Selected Countries

Hungary	Clients under rehabilitation; youth (including drop-outs); the long-term unemployed; citizens living in underdeveloped regions; those who are over 45 years old; women during and following maternity leave.
Romania	Young graduates of educational institutions; young people at risk of marginalization; Roma ethnic minority; persons from rural areas; unemployed aged over 45; persons with disabilities.
Slovenia	The long-term unemployed, unemployed youth (up to 24 years) without completed vocational education or without work experience; jobseekers over 50 years old; unemployment benefits and social benefits recipients; disabled persons.
Czech Republic	Parents returning to work following maternity leave or parental leave; young jobseekers under age 25; persons with health limitations; persons over age 50; the long-term unemployed.
Latvia	Persons 15-25 years old; disabled persons (persons for whom the invalidity has been determined); persons after parental leave; persons of pre-pension age (not more than 5 years until the age necessary to receive the state old age pension); the long-term unemployed (have been registered with PES for more than 1 year); ex-convicts (persons discharged from imprisonment); other target groups in accordance with the national employment plan, for instance, persons who have alchocol, drug, psychotropic, or toxic substance addiction; persons who take care for a member of a family.
Slovakia	Individuals who are over 50 years old; the long-term unemployed (registered as a jobseeker longer than 12 out of the last 15 months); younger than 25 years old, have completed training in the previous 2 years, and have not found regularly paid employment since, have neither been engaged in employment nor undergone an apprenticeship within a systematic training scheme due to

	parental commitments; parents or other persons who have been granted custody (permanent or temporary) of a child by court order and are responsible for up to 3 children until school-leaving age, or single parents who are responsible for at least 1 child until school-leaving age; are no longer able to continue their previous employment for health reasons; have moved residence from other EU member states to Slovakia; people with disabilities; foreigners who have been granted asylum; have a reduction in their fitness to work of between 20 and 40 percent; have had their employment terminated for organizational reasons, or due to a threatening occupational disease, or due to having been subjected to the maximum official limit of exposure to dangerous materials, or due to having reached the age limit for their particular line of employment; have no apprenticeship or school leaving certificates; had no regular employment before being sentenced to imprisonment; have completed a rehabilitation course (after alcohol or substance abuse), or have completed a prison sentence, or have completed a minimum period of 6 months as a result of other sanctions.
Albania	Mothers with many children; mothers over 50 years old; young people under 18 years old; the long-term unemployed; members of households at the poverty level; victims of trafficking; individuals who benefit from programs of financial support; individuals who become unemployed as a result of enterprise restructuring and privatization; single unemployed mothers; divorced women with social problems; individuals who returned from emigration and have economic problems; newly graduated individuals unfamiliar with the labor market; individuals who have served prison sentences; disabled individuals; Roma individuals; and unemployed orphans.
Montenegro	Disabled persons, persons seeking employment for more than 5 years, unemployed persons with over 25 years of pension insurance, and persons whose work is no longer needed due to enterprise downsizing, bankruptcy, or liquidation.

Source: Employment promotion legislation in selected countries.

Job placement services:

- Job search assistance services
- Regular meetings with personal employment advisor (jobsearch follow-up, update of employment plan, identification of unemployed needs or special support within employment programs, etc.)
- Direct referral of jobseekers to vacancies
- Jobsearch skills training programs
- Job application and interview preparation
- CV composition and submittal
- Job clubs
- Job and vacancy fairs

- Informational interviews
- Employer contact (intermediation) services
- Small business advisory meetings
- Sessions on current labor market information and regional jobs
- Job motivation seminars.

Counseling services:

- Career/job counseling (individual or group-based)
- Vocational counseling
- Legal counseling on PES services and rights as well as obligations for newly registered unemployed
- Social counseling (how to handle the family budget, etc.)
- Medical counselling.

Specialized services:

- Vocational rehabilitation: services for the disabled include work capacity assessment and vocational planning, exploring employment options, evaluating aptitude, and promoting job placement
- Setting up of individual action plans
- Surveillance of independent jobsearch
- In-depth assessment of skills, abilities (aptitude testing), and occupational skills
- Referrals to ALMPs after a period of unsuccessful jobsearch
- Labor redeployment services (programs for workers who have received redundancy notice)
- Cooperation with all relevant stakeholders – the social partners, social benefit organizations, education and training providers, other public organizations, and private employment agencies.

ICT services:

- Internet: viewing jobs and training places
- National call center service: a jobseeker can find out about jobs, training, and unemployment security
- Email notification: provides clients with information on jobs and training options
- CV net: posting of CVs on a freely accessible online service.

Services to inactive population. The inactive can be defined as persons who are not regarded as part of the workforce and who are normally on passive benefit schemes (e.g., disability pension,

sickness allowance, early retirement schemes, and unconditional social assistance) with no or few obligations to look for work.

In most cases, the inactive may only receive information from PES about the labor market and job vacancies/skills needs. Also, in some countries, referrals to free (publicly funded) external training and education, and coaching for employability skills might be provided. The list of services for the inactive population in selected countries follows. [10]

In Poland, any person not registered as unemployed or as a jobseeker may use the so-called open job offers (i.e., those which indicate the employer). Such offers are displayed on a notice board in local labor offices, in the press or on the website of the office, during job fairs or exchanges, etc. Non-registered persons also have the right to obtain exhaustive information on the services of the labor office and possibly the rights to which he/she is entitled, including the right to obtain information on the conditions and rules of registration.

In the Czech Republic, the EURES information and counseling service also offers its facilities at no charge to clients who are not registered. This service has been introduced at all 77 labor Offices in the Czech Republic.

In Austria, unregistered persons may use the "*e*job room," which is a self-service job placement internet platform. In Sweden, unregistered clients have free access to the self-service system on the internet as well as telephone services provided by Arbetsförmedlingen.

In the United Kingdom, customers who are not registered as a jobseekers (for benefits purposes) can still apply for jobs through the Jobcentre Plus website or through the electronic job kiosks that are available in offices, some libraries, and supermarkets. Although non-registered customers are unable to access Jobcentre Plus contracted training and support, they may be able to access similar, non-contracted services delivered by their local authorities, community groups, and not for profit organizations. In addition, Jobcentre Plus delivers a comprehensive range of benefits to inactive customers of working age, including benefits for lone parents. It ensures their benefits are accurate and on time; gives advice to parents on formal childcare; and, helps them understand the conditions for receiving benefits to help fraud and error.

[10] www.pesmonitor.eu

In Europe, Bulgaria, the Czech Republic, and Denmark are the only countries that provide active job brokering (pre-selection of suitable candidates from the register for particular vacancies) to all inactive people. Germany, Hungary, Ireland, Latvia, Norway, and Sweden provide active job brokering to selected inactive groups (EC 2009).

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Scientific research: Latvia: "Who is Unemployed, Inactive or Needy? Assessing Post-Crisis Policy Options"

LABOR MARKET AND SOCIAL CONDITIONS DIAGNOSTIC

POVERTY, INEQUALITY, AND THE SOCIAL IMPACT OF THE FINANCIAL CRISIS IN LATVIA

Katrin Gasior, Orsolya Lelkes (with Eszter Zólyomi)

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16 May 2013

European Centre for Social Welfare Policy and Research,
Vienna

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Foreword

The focus of the research is to explore poverty and income inequality trends in Latvia in an EU comparison before, during and after the financial and economic crisis. We aim to identify the winners and losers from the crisis and the vulnerable social groups. The main goal is to contribute with background evidence to the government strategy promoting inclusive growth.

Who are the main losers of the crisis? Which groups benefitted relatively with declining exposure to poverty? What is the poverty level of these groups? Has poverty declined most among the high-risk groups? Has it increased most among the low-risk groups? Is there any link between the level of poverty and change over time? In our overview chart we are using the anchored poverty rate for monitoring the impact of the crisis on poverty. We present the poverty rate and changes over time for the period 2006-2009. We use quantitative information to assess poverty developments in different groups in society grouped according to socio-economic, demographic and geographical factors. We do not take a qualitative approach.

Our analysis is based on Eurostat's August 2012 release of the 2010 round of the European Union Statistics on Income and Living Conditions (EU-SILC), with 530,000 individuals across 27 EU countries. The sample size for Latvia included 15,290 individuals living in 6,255 households.

The first part of the report presents the EU context, including the comparison of inequality and poverty trends of Latvia with that of other EU countries. In the second part we monitor the situation of specific social groups and its change over time in Latvia.

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Main findings

Latvia is one of the countries with the highest inequality within the EU, and inequality increased between 2004 and2009. The incomes of the wealthier groups grew proportionately more than that of those below the poverty threshold.

In 2009, following the crisis Latvia stands out as the country with the highest at-risk-of-poverty rate. By 2010, the poverty rate fell to 19.1, which is below many other countries. According to our calculations, in Latvia, 1% of the population has an income which does not reach 2.5$/ day, and 2.9% lives on incomes below 5$/day. Only Lithuania or Romania has a similar degree of extreme poverty among the EU countries.

Severe material deprivation reaches 27% in Latvia[1],. Changes in this measure exhibit a U-shape, with a decrease (the proportion of people who cannot afford most of the items has decreased from 39 per cent in 2004 to 16 per cent in 2007), followed by an increase (to 27 per cent in2009). A similar U-shape pattern characterises the other two Baltic States, Lithuania and Estonia.

We assess the impact of the crisis on poverty rates in Latvia using the 'at-risk-of poverty rate anchored in 2006', as it reflects changes in price levels, but not changes in average incomes. In Latvia, due to the rapid rise in average incomes in 2007 and 2008, followed by a drop in 2009, the at-risk-of-poverty threshold differs significantly from the anchored threshold. The anchored measure can be considered to indicate the changing proportion of the population who can afford to purchase a fixed basket of goods and services.

Between 2006 and 2009, the poverty risk for children, young adults, single parents, tenants paying a market rate, those living in urban areas increased to a large extent. In contrast, there was a relative improvement (declining poverty rate) among older people, people living alone (including both those over 65 and below), people living in households with high work intensity and the foreign-born population.

There is no consistent relationship between a group's level of poverty in 2006 and the change in risk of poverty from 2006 and 2009. There was no major change in the situation of individuals with the highest poverty rate, i.e. those who live in households with very low or low work intensity. Among the high-risk groups, the situation of single parents and that of tenants paying a market rate worsened over time, while the situation of unemployed, single persons (including both those over 65 and below), improved over time. Among those with a relatively lower risk, the poverty rate of older people declined, while those living in urban areas increased.

Changes between 2006 and 2009 indicate the deepening of poverty and increasing polarisation. Differences across social groups in the extent of poverty gap (the depth of poverty) were much smaller in 2006 than in 2009.

Who are the poor? Nearly two thirds of the poor population are constituted by people who live in households with low work intensity. 28% of the poor population are unemployed. "Working poor" do exist in Latvia, even though the share of employed people is lower (26%) within the poor population than in the general population (46%). 62% of the poor live in rural areas, while actually only about half of the population lives there.

***

[1] It should be noted that there is a large subjective element in the material deprivation measure and thus we should read it with caution.

Our analysis is based on Eurostat's August 2012 release of the 2010 round of the European Union Statistics on Income and Living Conditions (EU-SILC)[2], with 530,000 individuals across 27 EU countries. The sample size for Latvia included 15,290 individuals living in 6,255 households in 2010[3]. The social situation is looked at it from a quantitative perspective using the EU's primary source of data for monitoring the poverty and social exclusion targets.

This dataset covers a period of six years for most of the EU Member States[4], which limits the estimation of time trends of poverty and inequality measures. The estimation of long-term trends is prone to comparability problems, as there is no consistent data source including Latvia and other European countries.

Timeliness of the results is an issue. EU-SILC data is released with a delay of two years, which means that the latest year available was 2010 at the time of our data analysis[5]. Survey data collects retrospective data on annual incomes. Income data, and thus indicators of poverty and inequality refer to the situation in 2009.

Although in our view it would be essential to take into account the margins of error of the risk-of-poverty figures, we cannot provide exact estimated due the data constraints. The size of these margins of error depends on the size of the sample, i.e. the number of people surveyed relative to the population of the country, and also the specific sample design (stratification and clustering). As the there is no detailed information on the latter in the EU-SILC User Data Base, the estimates based on sample size alone would underestimate confidence intervals, and thus statistically significant differences would be overstated. Therefore we are not able to provide the confidence intervals of the indicators.

1. The EU context: comparison of inequality and poverty trends of Latvia with that of other EU countries

In this section we compare empirical evidence referring to Latvia with that of other European Union countries.

1.1. Inequality of income distribution

The S80/S20 quintile ratio measures the proportion of the total equivalized disposable income received by the 20 per cent of the population with the highest income (top quintile) compared to that received by the 20 per cent with the lowest income (lowest quintile).

The difference between the income shares of the lowest quintile and the highest quintile groups in 2009 is highest in Lithuania, followed by Latvia and Spain. All three countries

[2] The EU Statistics on Income and Living Conditions, an annual survey to collect comparable data in EU Member States on these and related aspects. The survey project was launched in 2003 and covered six Member States (Belgium, Denmark, Greece, Ireland, Luxembourg and Austria) plus Norway; it was extended in 2004 to a further seven (to the EU15 — with the exceptions of Germany, the Netherlands and the UK — plus Estonia). In 2005, the survey covered all EU25 countries, and as from 2007 it covers Bulgaria and Romania as well (together with Turkey and Switzerland). Additional information can be found at: http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc

[3] For more details on the Latvian sampling and data quality, see: Central Statistical Bureau of Latvia (2011). Intermediate Quality Report EU-SILC 2010 Operation in Latvia. Downloadable at: http://www.csb.gov.lv/sites/default/files/eu-silc_intermediate_quality_report_latvia_2010_0.pdf

[4] Eight years for Austria, Belgium, Denmark, Greece, Ireland and Luxembourg and four years for Bulgaria and Romania.

[5] The data analysis for this paper was completed in February 2013.

exhibit of a ratio of about seven, which means that altogether the richest quintile has seven times more income than the poorest quintile. On the contrary, differences are relatively low in Hungary, Slovenia and Czech Republic, were the top quintile has only three times more than the lowest quintile. Eleven other countries (Sweden, Finland, the Netherlands, Austria, Slovakia, Belgium, Luxembourg, Denmark, Cyprus, France and Germany) have a ratio of four times higher incomes.

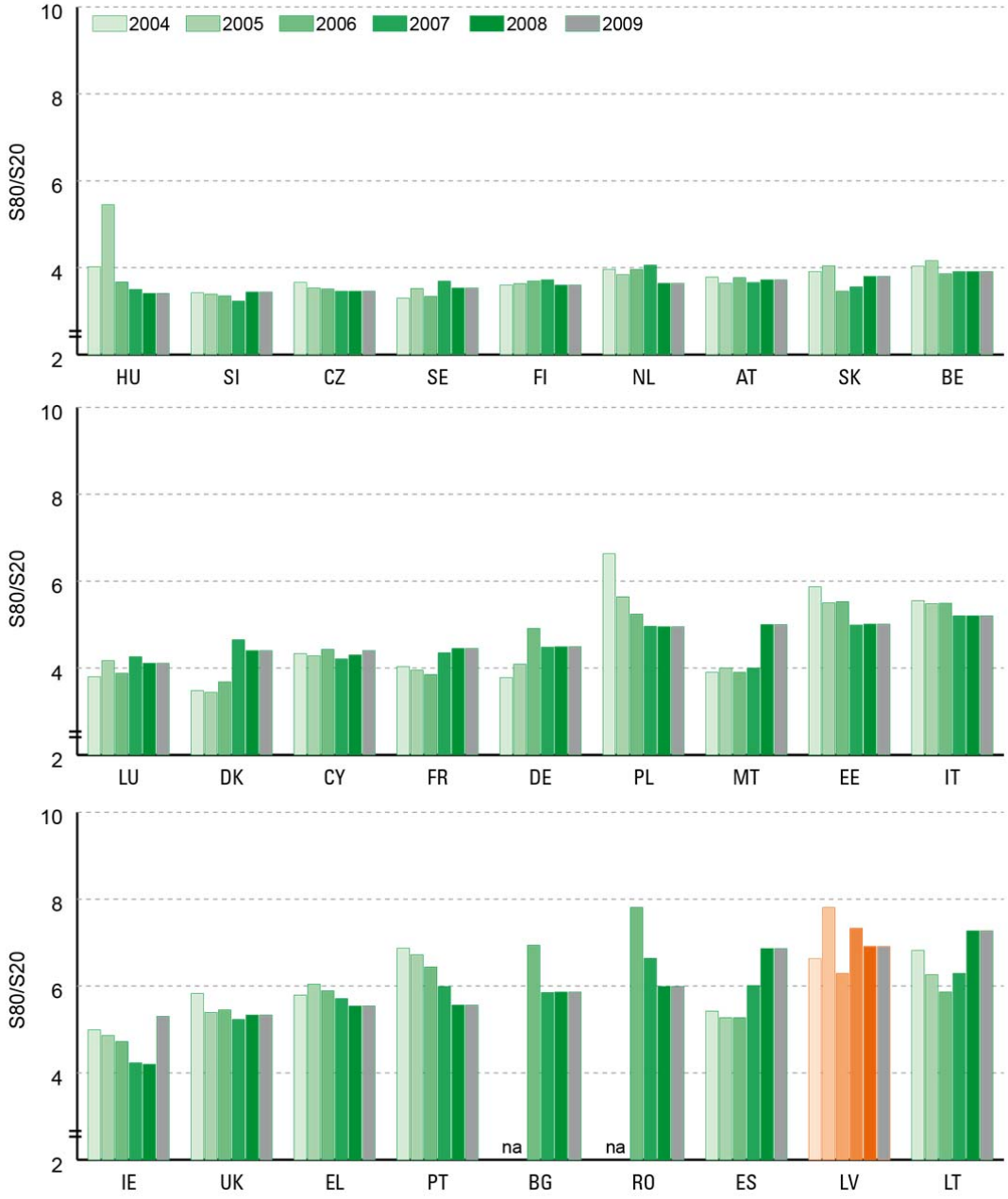
The level of inequality remained quite stable in those EU countries with relatively low levels of inequality. In contrast, there is considerable fluctuation in countries with higher inequality. Eastern European countries appear to cluster into two distinct groups:

- Latvia, together with Poland, and Lithuania had been the countries with the highest inequality with a ratio around seven times higher incomes. Inequality levels have been volatile in Latvia and in Lithuania during this period, and the 2009 value is somewhat higher than that of 2005. In contrast, inequality in Poland had a decreasing trend.
- In contrast, Hungary[6], Slovenia, the Czech Republic and Slovakia were among the EU countries with the lowest inequality already in 2005, with relatively low fluctuations from year to year.

In Latvia, as measured by the S80/S20 ratio, inequality increased from 6.3 to 7.3 from 2006 to 2007 and levelled off at 6.9 during the last two years. These changes are mainly due to changes at the top of the distribution (top decile), while the share of other deciles within the total national equivalized income remained relatively stable over the whole period.

[6] In Hungary, the sharp increase in 2005 is likely to be attributable to a measurement error (see Ward et al. 2009, p. 44.).

Figure 1: Inequality of income distribution across EU countries: S80/S20 quintile ratio, 2005-2009



Source: EU-SILC 2005-2010
Note: Ranked according to 2010 data. Data for Malta 2005-2008, Ireland and Cyprus 2010 retrieved from EUROSTAT database.

An alternative indicator of inequality, focusing on the bottom and the top of the distribution indicates that there was an increase in inequality in Latvia in the period between 2005 and 2009**.** The P90/P10 ratio (the ratio of the upper bound value of the ninth decile to that of the first decile) increased from 4.9 to 5.4 (Table 1). High incomes rose proportionately more than low incomes: the upper bound value of the 9th income decile rose by 212%, while that of the bottom income decile increased by only 191 per cent. The gap between low and high incomes became wider in Latvia.

Table 1: Income inequality in Latvia in 2005 and 2009

	2005	2009	Change in %
P90 (upper bound value of the 9th income decile)	4,808	10,171	212
P10 (upper bound value of the lowest income decile)	986	1,882	191
P90/P10 ratio	4.9	5.4	

Source: own calculations based on data retrieved from Eurostat database.
Note: P90/P10 ratio - the ratio of the upper bound value of the ninth decile to that of the first decile

1.2. Population at risk of poverty

The at-risk-of-poverty rate measures the share of persons with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60 per cent of the national median equivalized disposable income (after social transfers).

The at-risk-of-poverty rate is a standard measure of social inclusion within the European Union. It displays the share of people who have a level of income below a certain threshold in relation to the median income in the country in which they live. Thus, someone defined as at-risk-of-poverty in one of the more prosperous EU Member States may have a significantly higher equivalized disposable income than someone above the at-risk-of-poverty threshold in one of the least prosperous countries.

We argue that it would be essential to take into account the margins of error of the risk-of-poverty figures. The figures for the risk of poverty are normally presented as single values. But since they are based on the information collected from only a sample of households, they are inevitably subject to a margin of error, even if the sample concerned is intended to be representative of the population of the country. It is important to take explicit account of the margins of error when assessing differences between countries or changes over time, otherwise there is a danger of reaching misleading conclusions. In particular, differences arising from these margins of error can be confused with real differences in the figures.

The poverty threshold value in comparison

The threshold for Latvia 2009 was 1,921 Lats, which amounts to 2,722 euros (see Table 2). This is 30% lower than in Estonia (reflecting higher average incomes in Estonia) and somewhat higher than in Lithuania. In terms of purchasing power standards that take into account the price levels of a country, there is no difference between the Lithuanian and Latvian poverty threshold levels, but the Estonian level is higher. The contrast is much larger with Germany, one of the main trading partners, where the poverty threshold is more than 11,000 euros, three times higher in purchasing power standards than the Latvian value.

Table 2: At-risk-of-poverty threshold (60% of median equivalized income) in single person households, 2009

	Latvia	Lithuania	Ratio LT/LV	Estonia	Ratio EE/LV	Germany	Ratio DE/LV
Euro	2,722	2,436	0.9	3,436	1.3	11,278	4.1
Euro in PPS	3,580	3,615	1.0	4,490	1.3	10,635	3.0
Lats	1,921	-		-		-	-

Source: own calculations based on data retrieved from Eurostat database.

These national standards express the assumption that individuals compare their situations to their compatriots and feel poor if they are not able to participate fully in their own society. With the ever increasing integration of the European Union, including the free movement of labour, people may increasingly use foreign countries as well as a reference point. With this caveat, the at-risk-of-poverty indicator is a useful instrument to identify those on low incomes and it enables the comparison of the situation of social groups within the country.

Poverty rates in 2009

In 2009, Latvia appears to stand out as the country with the highest at-risk-of-poverty rate. However, if taking confidence intervals into account, the poverty risk is not statistically different from its neighbouring country Lithuania followed by Bulgaria, Romania, Greece and Spain. The poverty risk in the third Baltic country, Estonia, is more than five percentage points lower than in Latvia, entirely because of a sharp drop in the at-risk-of-poverty rate in Estonia from 2008 to 2009.

Different country groups can be identified:

- Eastern European countries, including Latvia, Romania, Bulgaria, Lithuania and Poland with relatively high poverty rates (between 18 and 21 per cent).
- Other Eastern European countries, including Slovenia, Hungary, Slovakia and first of all the Czech Republic are among the EU Member States with the lowest poverty risk (between 9 and 13 per cent).
- Northern European countries, such as the Netherlands, Sweden, Finland and Denmark are also low risk countries, together with Austria, France, Germany, Luxembourg and Belgium (between 10 and 13 per cent).
- The Southern European countries, including Portugal, Italy, Greece and Spain are among the countries with the highest poverty risk (between 18 and 21 per cent). While Cyprus and Malta comprise of a statistically significant lower risk (around 15 per cent).
- Anglo-Saxon countries, the UK and Ireland tend to have a poverty rate of 16-17%. The situation is similar in Estonia, where the poverty rate is much below that of the other Baltic States.

1.2.1. Change in at-risk-of-poverty rate anchored in 2005

The 'change in the at-risk-of poverty rate anchored in 2005' is defined as the proportion of the population whose equivalized disposable income is below the 'at-risk-of-poverty threshold' in a particular year - the EU indicator currently uses 2005 - adjusted for inflation.

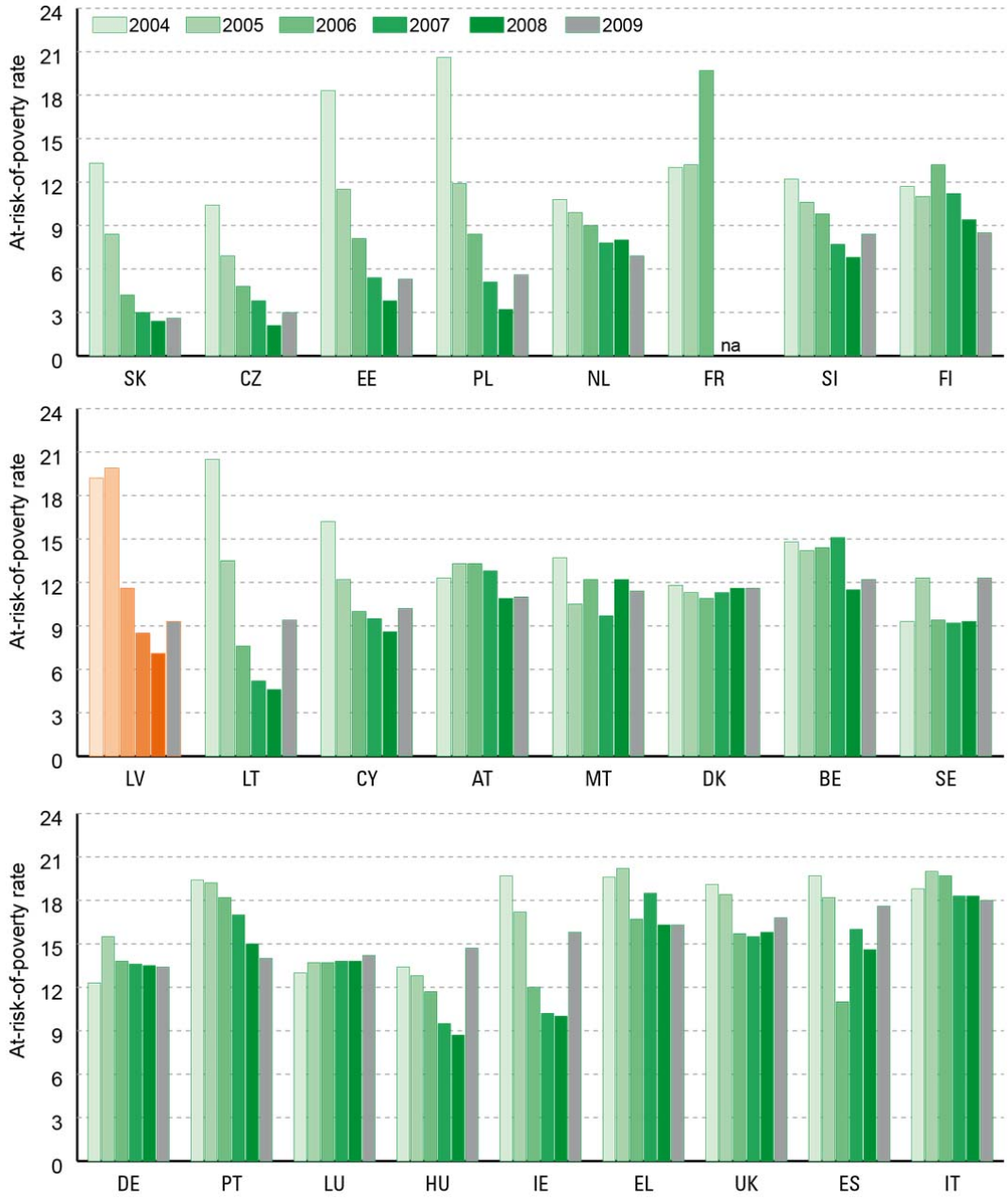
Our lead indicator of poverty in this section is the 'at-risk-of poverty rate anchored in 2005', as it reflects changes in price levels, but not changes in average incomes. In Latvia, due to the rapid rise in average incomes in 2007 and 2008, followed by a drop in 2009, the at-risk-of-poverty threshold differs significantly from the anchored threshold. The anchored measure can be considered to indicate the changing proportion of the population who can afford to purchase a fixed basket of goods and services.

With the threshold anchored in 2004, the proportion of people at-risk-of-poverty declined between 2004 and 2009 across most of the EU countries. Accordingly, this suggests that an increasing number of people in most parts of the EU could afford to buy a fixed basket of goods and services over the period. The exceptions are France (although no data is

available for the latest years), Sweden, Germany and Hungary. Especially in Hungary and Sweden, the increase is due to a high increase from 2008 to 2009, while in previous years the anchored risk has either decreased or remained stable.

Similar to the latest developments in Hungary and Sweden, a number of other countries were also affected by the negative social consequences of the crisis. In Estonia, Poland, Slovenia, Latvia, Lithuania, Ireland and Spain, the anchored risk-of-poverty rate increased from 2008 to 2009. Most of these countries experienced a downward trend in earlier years.

Figure 2: At-risk-of-poverty rates anchored at a fixed moment in time (2004) across EU countries, 2004-2009



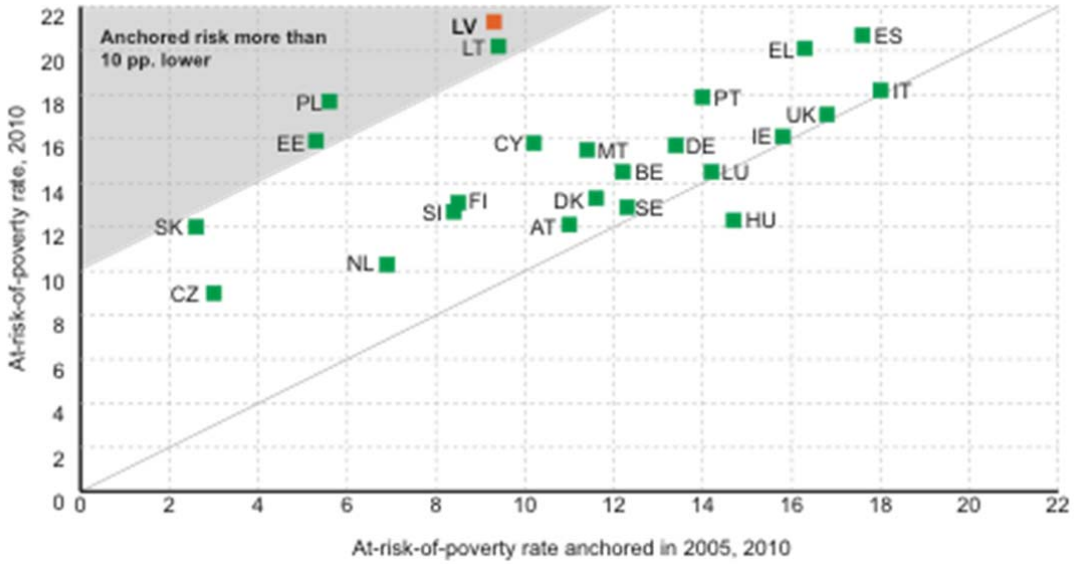
Source: EU-SILC 2005-2010

Note: Ranked according to 2010 data. Data for Bulgaria and Romania not available. Data for the United Kingdom 2009 and 2010, Data for Malta 2005-2008, Ireland and Cyprus 2010 retrieved from EUROSTAT database.

Although the fixed poverty threshold indicates a general downward trend from 2004 to 2009 in most countries, the standard relative poverty indicator (At-risk-of-poverty rate) shows an increasing proportion of people with income below the poverty threshold in many countries. The difference between the changes in the two indicators in 2009 is particularly striking in the three Baltic States, as well as in Poland, with a difference of more than ten percentage points (see Figure 3). An explanation for the difference in the two poverty measures is the changing shape of the income distribution curve: high incomes grew more than low incomes.

There are countries where the two poverty measures show similar results, both in terms of level of poverty risk as well as in terms of trends over time: Austria, Belgium, Germany, Denmark, Italy and Luxembourg.

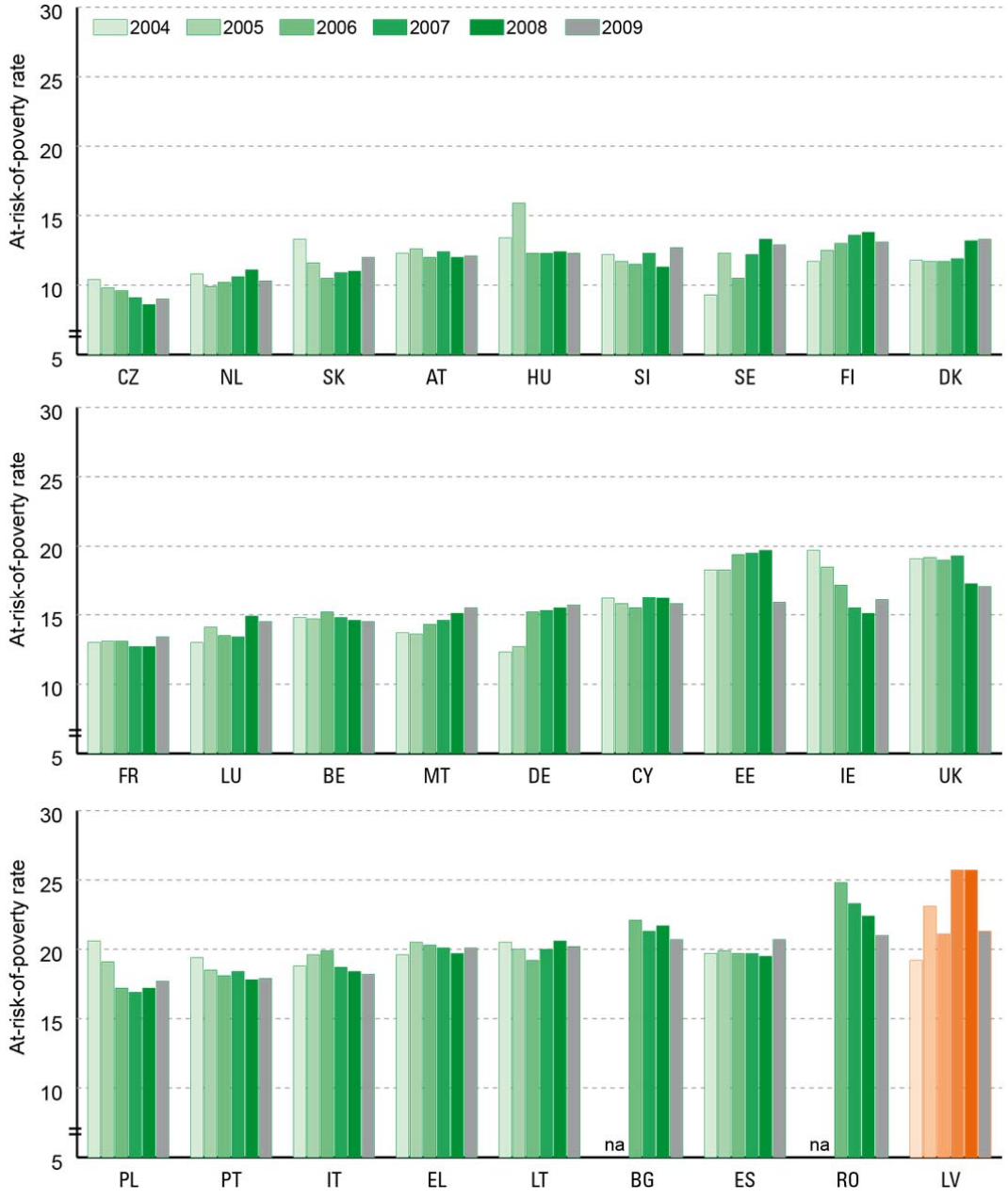
Figure 3: At-risk-of-poverty rates anchored at a fixed moment of time (2004) compared to non-anchored risk rates across EU countries, 2009



Source: EU-SILC 2010
Note: Data for Ireland, Cyprus and the United Kingdom retrieved from EUROSTAT database. Data for Bulgaria and Romania not available.

1.2.2. Time trends of the "conventional" at-risk-of-poverty indicator (based on annual incomes)

Figure 4: At-risk-of-poverty rates across EU countries, 2004-2009



Source: EU-SILC 2005-2010
Note: Ranked according to 2010 data. Data for Malta 2005-2008, France 2008, Ireland and Cyprus 2010 retrieved from EUROSTAT database.

In about half of the EU countries, the at-risk-of-poverty rates remained stable during the period from 2004 till 2009 (survey years 2005 to 2010). In 13 out of 27 EU member States, there was no statistically significant change.

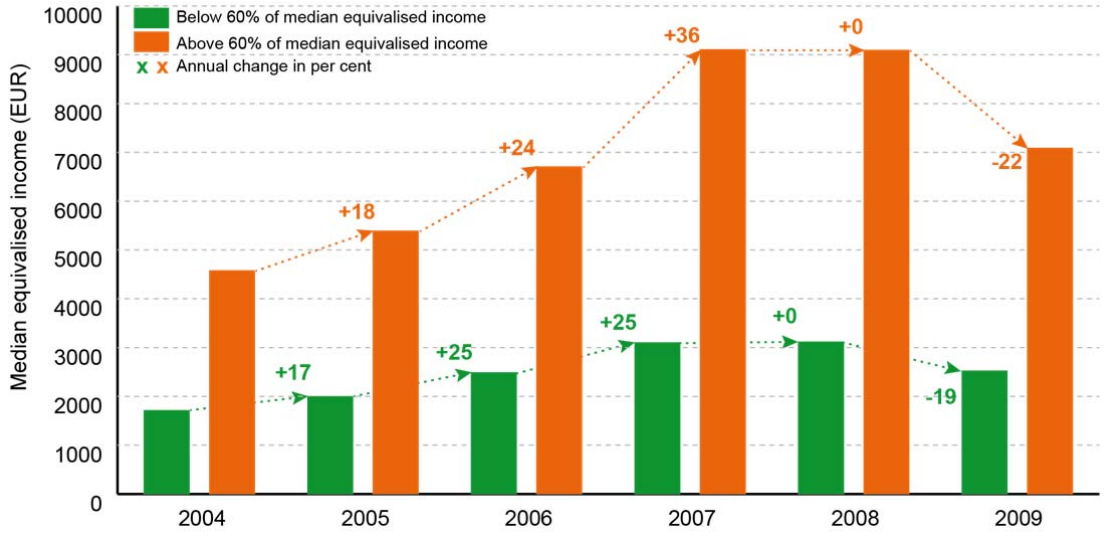
Comparing the situation in 2004 and in 2009, the proportion of population at-risk-of-poverty declined in the Czech Republic, Slovakia, Hungary, Estonia, Ireland, the United Kingdom and Poland. A clear declining trend during the whole period characterised Bulgaria, Poland, Ireland and to a lesser extent Portugal. In Ireland, the decrease was almost 4% points, the highest in the EU. The large drop of poverty rate in Estonia in the most recent data year (referring to 2009 incomes) (4%) moved the country closer to the Scandinavian level of

poverty. Note, however, that this drop reflects falling real incomes and with the economic recovery and rising average income poverty may be on the rise again. In the UK, data suggest a substantial drop in 2007.

In contrast, the proportion of the poor increased in Sweden, Finland, Malta, Germany, Spain and Latvia. Similar to Hungary, the change in Germany is subject to measurement errors as poverty risk rates have been underestimated[7]. Latvia is the country with the highest fluctuations in annual poverty rates. In the survey years 2007 and 2008, Latvia has reached the highest risk-of-poverty rates both in country specific terms as well as in EU wide comparison across the survey years. This is partly due to a rise of median income.

In Latvia, inequality was on the rise before the financial crisis: the incomes of the wealthier groups grew proportionately more than that of those below the poverty threshold. The median income of persons above the threshold grew by 36 per cent from to 2007, while the rise was only 25% for those on poverty levels of income. Due to the relational character of the poverty indicator, the over proportional increase in incomes at the upper end and the lower increase of incomes below the poverty threshold lead to an increase of the threshold value (and also to that of the poverty rate). In 2009, as **Error! Reference source not found.** shows, both groups experienced a drop in median equivalized incomes, although it was somewhat lower (proportionately) among the poor. The median income of those who are at risk of poverty fell back to its.

Figure 5: Median equivalized income of persons above and below the at-risk-of-poverty threshold in Latvia, 2004 – 2009



Source: Eurostat.

The following two sub sections include two absolute poverty measures: at-risk-of-poverty rate anchored in 2004 and the absolute poverty risk set at Dollar 2.5 and Dollar 5 a day. The former controls for the impact of price changes within the country and the latter enables easy cross-country comparisons of destitution.

[7] See Frick and Krell (2009)

1.2.3. Absolute poverty rates

The table below compares absolute poverty rates, using two alternative thresholds. The 2.5 US dollar / day and the 5 USD/day thresholds express a very low level of subsistence, and thus it is an indicator of extreme deprivation. According to our calculations, in Latvia, 1% of the population has an income which does not reach 2.5$/ day, and 2.9% lives on incomes below 5$/day.

Only Lithuania or Romania has a similar extent of extreme poverty among the EU countries.

Note, however, that these calculations include only the non-institutionalised population, living in private households. The homeless population, for example, is excluded from these figures, so extreme poverty is likely to be underestimated.

Table 3: Absolute poverty rates, using a 2.5 USD/day and a 5 USD/day threshold, 2009

		2.5 $/day	5 $/day
AT	Austria	0.0	0.1
BE	Belgium	0.0	0.2
BG	Bulgaria	0.1	1.8
CZ	Czech Republic	0.0	0.1
DE	Germany	0.0	0.1
DK	Denmark	0.3	0.6
EE	Estonia	0.3	0.9
EL	Greece	0.1	0.2
ES	Spain	0.8	1.4
FI	Finland	0.0	0.1
FR	France	0.1	0.2
HU	Hungary	0.0	0.1
IT	Italy	0.4	0.8
LT	Lithuania	1.2	3.0
LU	Luxembourg	0.0	0.0
LV	Latvia	1.0	2.9
MT	Malta	0.2	0.4
NL	Netherlands	0.1	0.3
PL	Poland	0.1	0.8
PT	Portugal	0.2	0.3
RO	Romania	0.9	6.1
SE	Sweden	0.2	0.4
SI	Slovenia	0.0	0.0
SK	Slovakia	0.3	0.6
UK	United kingdom	0.1	0.2

Source: Own calculations based on EU-SILC 2010

1.3. Severe material deprivation

The severe material deprivation rate measures the percentage of the population that cannot afford at least four of the following nine items:

1) pay rent or utility bills

2) keep home adequately warm
3) face unexpected expenses
4) eat meat, fish or a protein equivalent every second day
5) a week holiday away from home
6) a car
7) a washing machine
8) a colour TV
9) or a telephone.

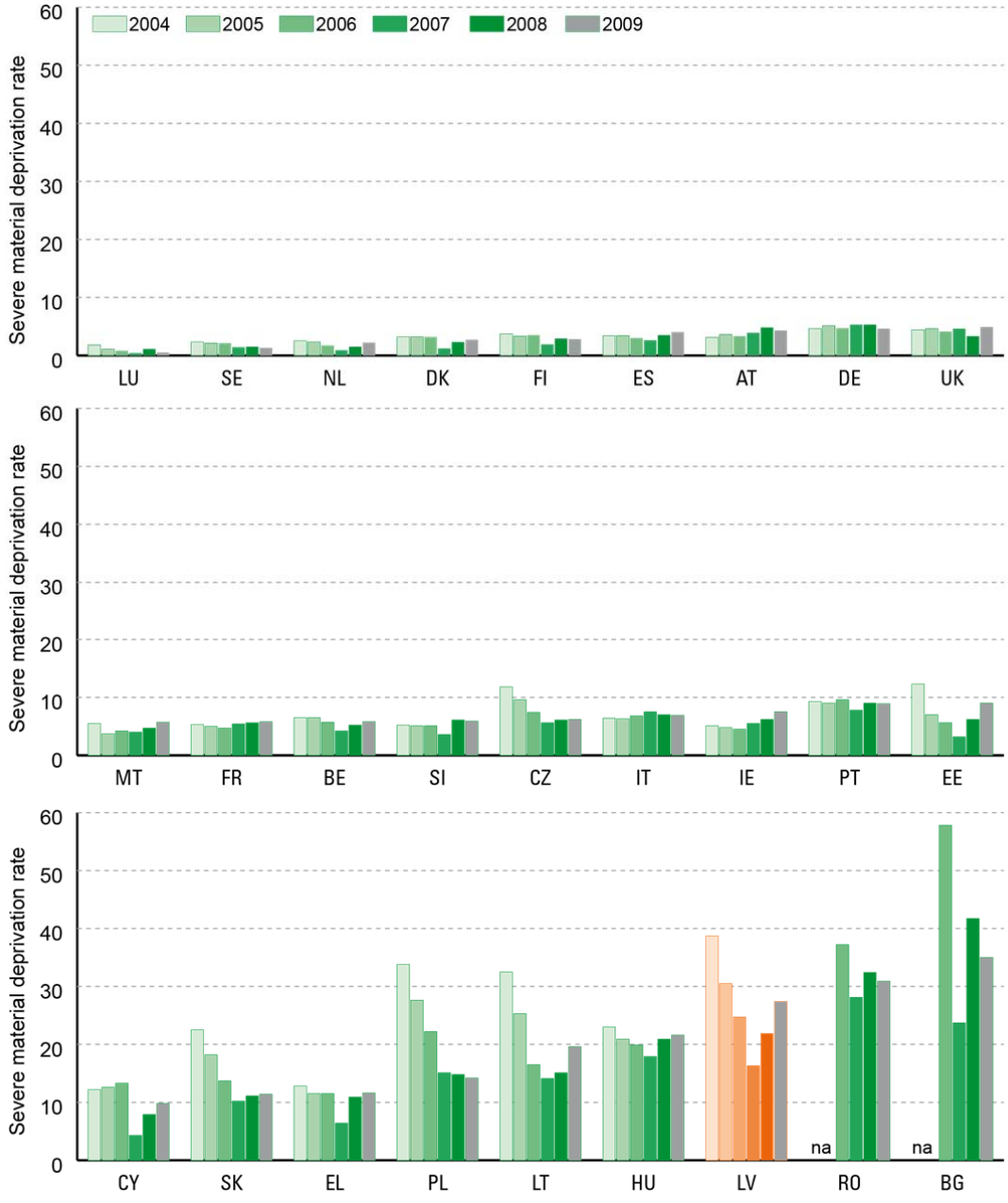
The severe material deprivation indicator measures the availability of fixed items considered by most people to be desirable or even necessary to lead an adequate life. Thus, the indicator uses an EU wide definition of severe material deprivation, in contrast to the country-specific poverty threshold values of the at-risk-of-poverty rate.

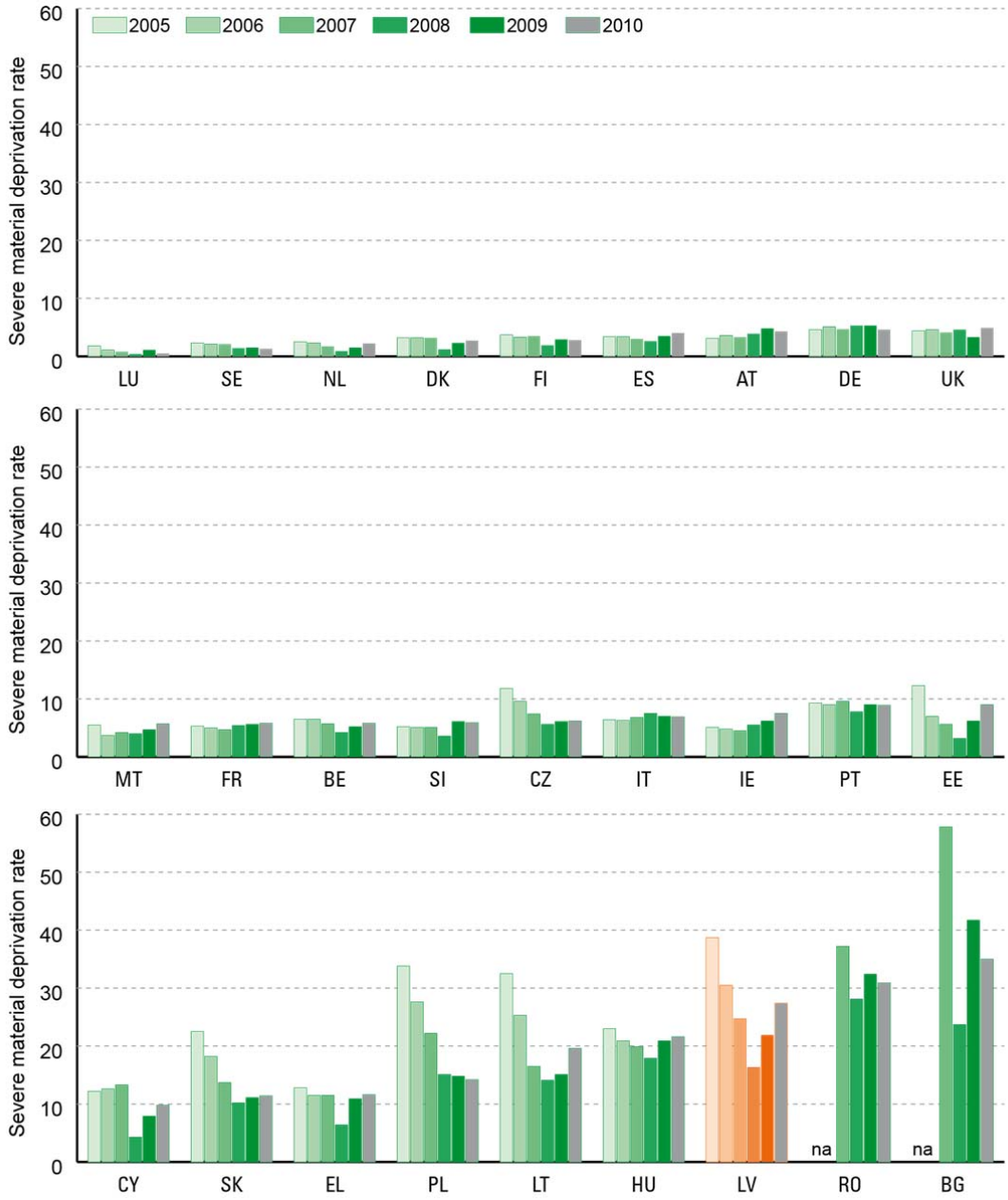
Severe material deprivation rates range from 0.5 per cent in Luxembourg to 35 per cent in Bulgaria. Latvia is among the countries with the highest proportion of people who cannot afford most of the items, with a severe material deprivation rate of more than 27 per cent. In contrast, most other countries show relatively low levels of severe material deprivation. In ten countries the proportion of people being severely materially deprived is below ten per cent, in five other countries even below five per cent.

Countries with relatively low severe material deprivation rates in 2009 experienced minor or no changes in the observed period. The three exceptions are the Czech Republic, Estonia and Cyprus. In the Czech Republic, the deprivation rate decreased from 12 per cent in 2004 to six per cent in 2009.

Changes in Latvia show a U-shape, with a decrease (the proportion of people who cannot afford most of the items has decreased from 39 per cent in 2004 to 16 per cent in 2007), followed by an increase (to 27 per cent in 2009). A similar U-shape pattern characterises the other two Baltic States, Lithuania and Estonia. Severe material deprivation in Latvia and Lithuania is much above the level of that in Estonia. In Lithuania, the rate is more than twofold and in Latvia it is more than threefold.

Figure 6:Severe material deprivation rate across EU countries, 2004-2009

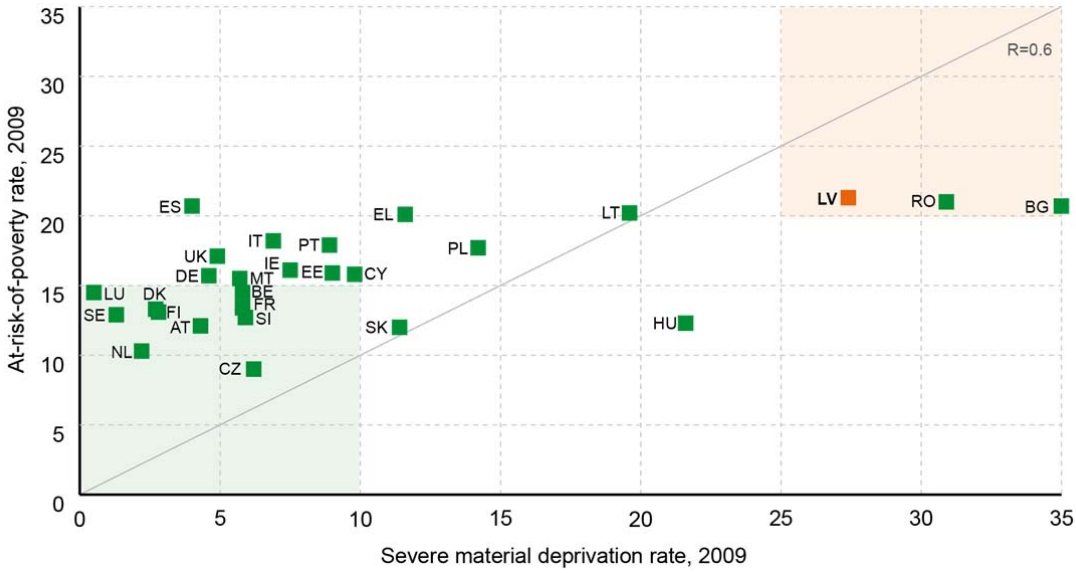




Source: EU-SILC 2005-2010
Note: Ranked according to 2010 data. Data for Malta 2005-2008, France 2008, Ireland and Cyprus 2010 retrieved from EUROSTAT database.

1.4. Indicators of social exclusion: an overview

Figure 7: Correlation between severe material deprivation rate and at-risk-of-poverty rate across EU countries, 2009



Source: EU-SILC 2010
Note: Data for Ireland and Cyprus 2010 retrieved from EUROSTAT database.

In Latvia, a large proportion of the population lives at risk of poverty or in severe material deprivation. The situation is similar to that of Bulgaria and Romania . The Latvian situation seems to be significantly worse than in the other two Baltic States of Estonia and Lithuania.

Table 4: Indicators of income inequality and poverty across the EU27, 2009

	At-risk-of-poverty rate	Severe material deprivation rate	Low work intensity
CZ	9	6.2	6.4
NL	10.3	2.2	8.2
AT	12.1	4.3	7.7
SI	12.7	5.9	6.9
SE	12.9	1.3	5.9
FI	13.1	2.8	9.1
DK	13.3	2.7	10.3
FR	13.4	5.8	9.8
LU	14.5	0.5	5.5
BE	14.5	5.8	12.6
MT	15.5	5.7	8.4
DE	15.7	4.6	11.1
UK	17.1	4.9	13.1
ES	20.7	4	9.8
IE	16.1	7.5	22.9
SK	12	11.4	7.9
CY	15.8	9.8	4.6
EE	15.9	9	8.9
PL	17.7	14.2	7.3
PT	17.9	8.9	8.6
IT	18.2	6.9	10.2
EL	20.1	11.6	7.5
HU	12.3	21.6	11.8
LT	20.2	19.6	9.2
BG	20.7	35	7.9
RO	21	30.9	6.8
LV	21.3	27.4	12.2

Source: EU-SILC 2010
Note: Data for Ireland and Cyprus 2010 retrieved from EUROSTAT database. The country grouping is based on a cluster analysis, using the Ward's linkage method. Low work intensity: refers to people aged 0-59.

The overview of three social exclusion indicators suggests that material deprivation varies the most across countries, followed by the low work intensity (Table 4). Therefore, the country grouping (based on a cluster analysis) is dominantly driven by the extent of material deprivation.

Social disparity in Latvia tends to be among the highest in the EU (Table 4). Inequality (the quintile ratio), the poverty rate and the severe material deprivation rate are all among the highest within the EU, reaching a similar high level as in Bulgaria and Romania The situation in Latvia seems to be significantly worse than in Estonia and Lithuania, especially with

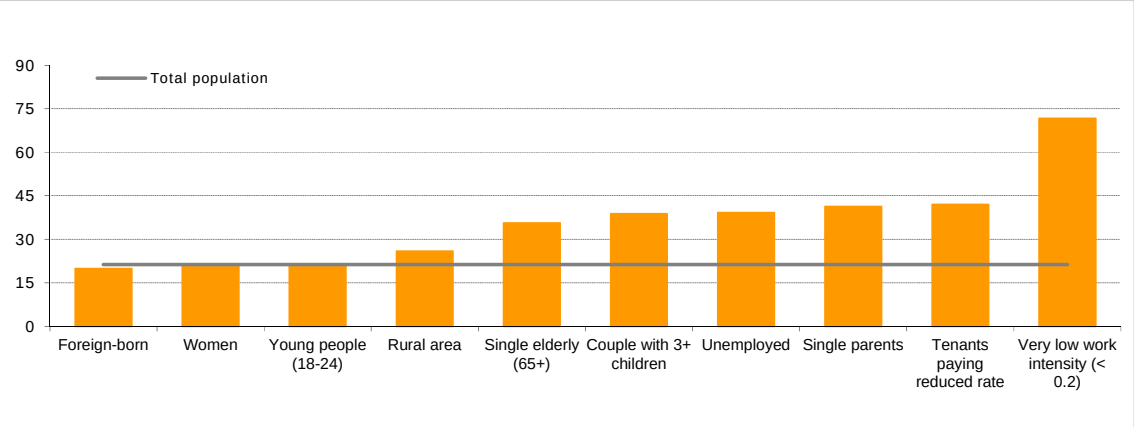
respect to severe material deprivation. Latvia thus seems to fare worse than other Baltic or Eastern-European countries.

2. The situation of specific social groups in Latvia

2.1. Poverty rates: the most recent evidence

Individuals living in households with very low work intensity have the highest poverty risk, affecting three out of four individuals living in such households (**Error! Not a valid bookmark self-reference.**). Similar high risks prevail in Lithuania and Estonia as well. The three Baltic States have the highest poverty rate for individuals living in very low work intensity households among the EU27.

Figure 8: At-risk-of-poverty rate of specific social groups in Latvia (%), 2009



Source: Own calculations based on EU-SILC 2010

Tenants (paying reduced rate), single parents, single elderly, couples with three or more children and the unemployed also face a risk well above the average.

Table 5: At-risk-of-poverty rate in regions of Latvia (%), 2006-2010

	2006	2007	2008	2009	2010
Riga	11.0	15.7	16.2	13.6	12.0
Pieriga	13.1	19.7	17.2	15.5	15.1
Vidzeme	28.1	31.6	38.1	24.8	23.8
Kurzeme	23.3	33.6	30.7	22.7	21.1
Zemgale	25.7	24.8	25.6	28.4	24.0
Latgale	40.4	42.1	42.2	34.7	30.3

Source: Statistics Latvia. Note that these regions are statistical regions, not administrative ones. The four statistical regions Kurzeme, Latgale, Vidzeme and Zemgale align with the planning regions of Latvia.

The poverty risk is the lowest in the Riga and the Pieriga regions, the latter being actually part of the Riga “planning region”, and is a neighbouring area (Table 5).

In contrast, poverty rate is the highest in the Latgale region, at the South-East, bordering mostly Russia and Belarus. These differences between the two extremes are well over

twofold, and have been prevalent in the past years as well, as suggested by our data series covering the years between 2006 and 2010.

Note that in Zemgale and Latgale, two high poverty regions, there was a marked decline of the poverty risk in 2010. This may be partly due to the fall of average national income, as these poverty figures are based on a national threshold.

Table 6: At-risk-of-poverty threshold (60% of median equivalized income) in Latvia, 2006-2009

	2006	2007	2008	2009
At-risk-of-poverty threshold (euros)	2,010	2,899	3,284	2,722

Source: Eurostat database

After a period of rapid rise of national income and thus the national poverty threshold in 2007 and 2008, there was a 17% drop in the poverty threshold value in 2009 (Table 6). These major changes in the poverty threshold imply that trends in the standard poverty rate, which is based on annual poverty thresholds, need to be interpreted cautiously. For example, the recent drop in the poverty rate may reveal very little on how the situation of the poor or the very poorest are protected by social policies. Using a fixed poverty threshold, which is only adjusted to price changes, a so called “anchored” rate seems to be more appropriate for analysing changes over time.

Table 7 presents detailed estimates for the at-risk-of-poverty rate for specific population subgroups in Latvia. This indicator is a lead indicator of social exclusion of the European Union. The indicator takes into account social benefits received in cash. As mentioned before, the at-risk-of-poverty rate is the share of people with an equivalized disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalized disposable income after social transfers.

The evidence suggests an age pattern: child poverty is rather high, while poverty among the elderly is below average. The education gradient is very strong: individuals with primary or secondary education are more likely to have multiple levels of poverty than those with tertiary education. The difference between those with primary and tertiary education is over four fold.

Households with dependent children are more likely to be poor than those without. Single parents and couples with three of more children are most at risk. Single persons have a high risk as well: one in three individuals is at risk of poverty. In 2006, 2007 and 2008, single persons aged 65 or over had a poverty risk of over 75%. Our calculations are verified by the official Eurostat estimates, which indicate figures of similar magnitude. The large drop in 2009 is partly due to declining average incomes, partly to the relative stability of pension incomes as opposed to wages and salaries.

Households with low work intensity, especially those below 0.5 have a very high risk.

Retired persons have about twice as high poverty risk than those employed, and the unemployed nearly four times as high risk, reaching almost 40%.

Tenants face a significantly higher poverty rate than owners, although possible mortgage payments may worsen the situation of the latter group.

There is a pronounced urban-rural divide, and people in rural areas are more likely to experience poverty level of incomes.

Table 7: At-risk-of-poverty rate (%), 2006-2009

	2006	2007	2008	2009
Total	21.1	25.7	25.7	21.3
Gender				
Men	19.3	23.3	24.2	21.7
Women	22.7	27.8	27.0	21.0
Age				
0-17	20.4	24.7	25.7	26.6
18-24	17.1	17.2	19.2	21.2
25-64	18.4	20.2	20.5	20.3
65+	33.4	51.3	47.5	18.8
Educational attainment				
Primary	34.5	40.8	42.2	32.0
Secondary	19.0	22.7	23.4	20.0
Tertiary	8.3	12.6	10.3	6.5
Household type				
Households without dependent children	*25.8*	*32.4*	*31.4*	*19.6*
Single person	59.0	61.0	58.6	35.0
Single person younger than 65 years	44.3	40.5	38.6	34.4
Single person 65 years or over	75.1	82.6	79.6	35.6
Two adults younger than 65 years	19.7	20.3	18.6	17.7
Two adults, at least one aged 65 years or over	22.2	47.5	40.8	11.9
Other households without children				
Households with dependent children	*17.8*	*20.8*	*21.4*	*22.7*
Single parent	34.4	41.8	39.0	41.3
Couple with one child	11.8	13.4	15.0	17.4
Couple with two children	16.4	21.1	22.1	18.4
Couple with three or more children	46.3	38.0	44.8	38.8
Other households with children				
Work intensity of the household				
0.0-0.49	59.3	61.6	62.8	52.2
0.50	23.7	32.6	27.5	24.2
0.51-0.80	12.6	10.2	14.3	9.2
0.81-1.00	6.6	8.6	7.7	5.3
Employment status				
Employed	10.9	12.0	11.5	11.4
Unemployed	49.2	40.7	34.2	39.2
Retired	36.4	54.4	49.0	20.4
Other inactive	29.3	30.9	30.9	28.6
Country of Birth				
Native-born	20.5	24.7	24.8	21.6
Foreign-born	25.2	31.6	31.5	19.9
Citizenship				
with Latvian citizenship	21.2	24.8	25.3	20.0
with other citizenship	22.5	30.5	28.8	22.0
Tenure status				
Owner	18.5	23.5	23.6	18.2
Tenant paying rent at market rate	22.3	28.2	32.1	33.0
Tenant paying rent at a reduced rate or rent free	42.4	48.1	47.4	42.0
Degree of urbanisation				
Urban area	12.7	18.8	19.7	16.6
Rural area	28.8	32.5	31.7	25.9

Source: Own calculations based on EU-SILC (2006-2009) and Statistics Latvia (2010)

We also assessed the composition of the population at risk of poverty. In order to be able to say whether it is “much” or “little” we compared the share of a particular group within the poor population with that within the total population (see

2.2. Who are the poor?

Figure 9 and Table 8).

There are more women among the poor than men, but it is largely due to their higher share within the population.

With respect to age groups, about half of the poor population is between the age of 25 and 64, but it is purely due to their high population share. 23% of the poor population consists of children (aged 0 to 17), surpassing their population share (19%).

The share of people at risk of poverty with only primary education is 42%, although their population share is only 27%, indicating their high relative poverty risk. Only 7% of the poor population has tertiary education.

Single persons constitute 17% of the poor population, single parents 11%, and individuals living in a household as a couple with three or more children constitute 8%. All three groups have a higher share among the poor than in the general population, indicating their higher poverty propensity.

Nearly two thirds of the poor population are constituted by people who live in household with low work intensity (below 0.5). 28% of the poor population are unemployed. Note that 26% of the poor are in employment. “Working poor” do exist in Latvia, even though the share of employed people is lower within the poor population than in the general population (46%).

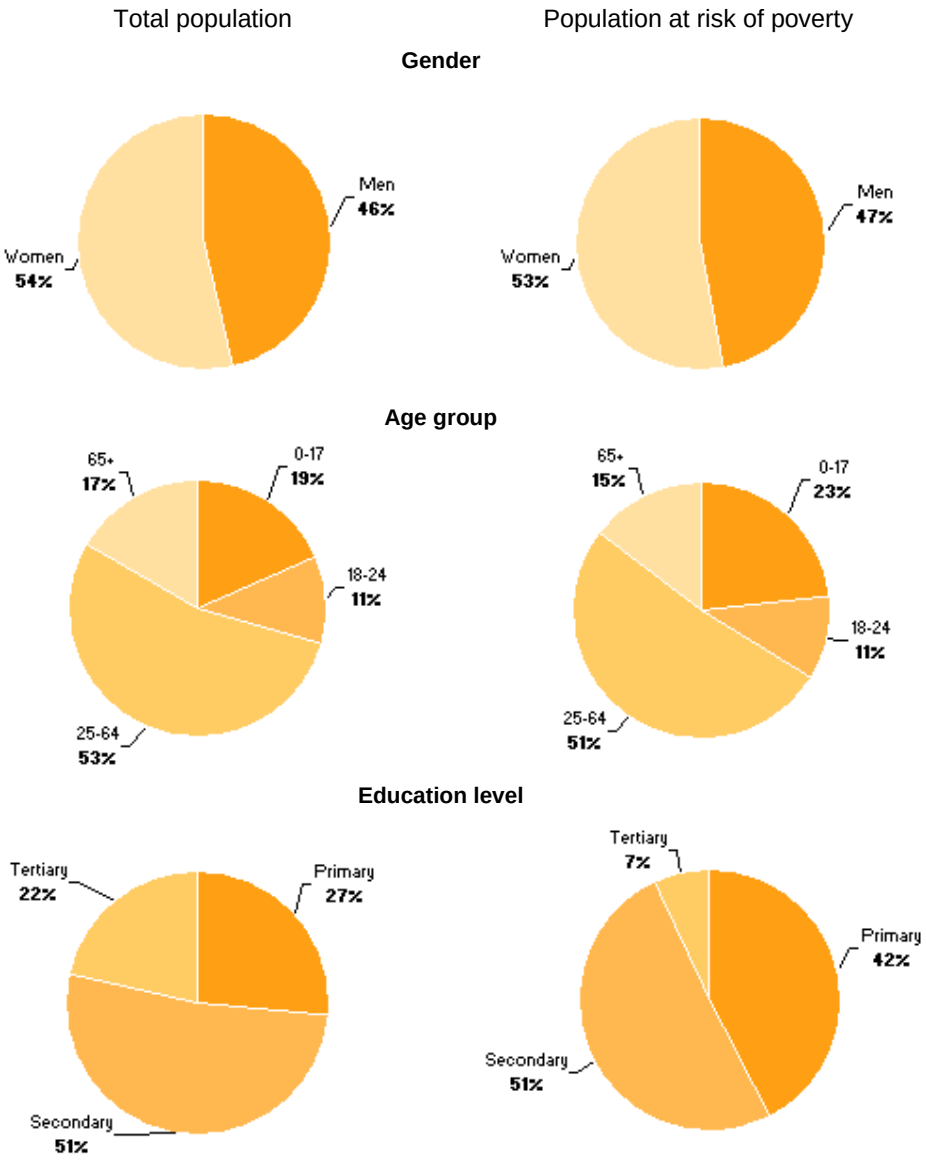
12% of the poor are foreign born, which is about the same as the share of foreign born population in the country. 19% of the poor are without a Latvian citizenship, which is again about the same as their share within the total population. Non-Latvian origin or citizenship thus do not seem to be associated with a higher prevalence of poverty.

72% of the poor population are owner-occupiers, 10% are tenants paying a market rate and 18% are tenants paying subsidized rent or no rent at all. The latter two groups are overrepresented among the poor compared to their population share.

62% of the poor live in rural areas, while actually only about half of the population lives there.

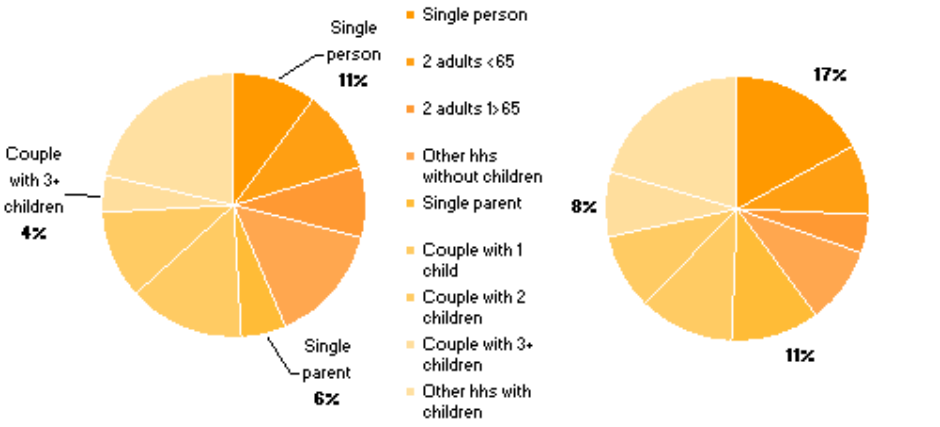
2.3. Who are the poor?

Figure 9: Composition of the total population and those at risk of poverty (%), 2009

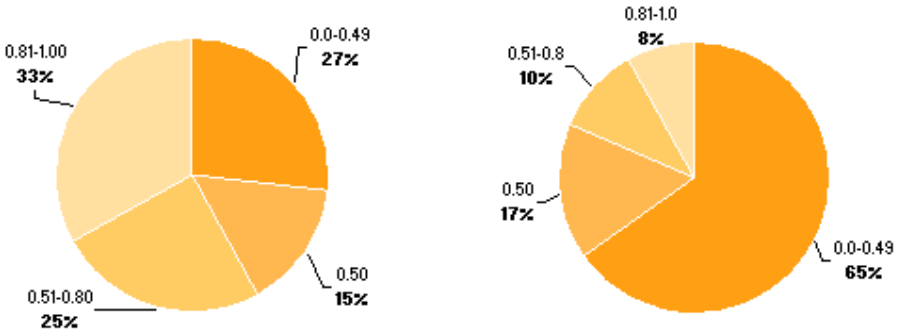


Total population | Population at risk of poverty

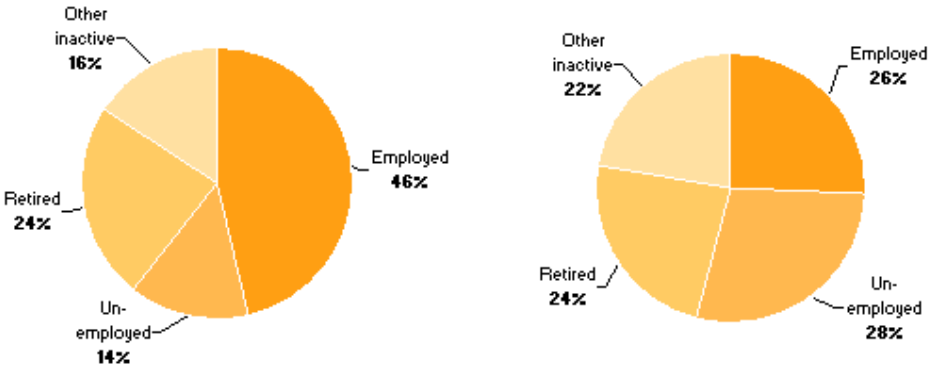
Household type



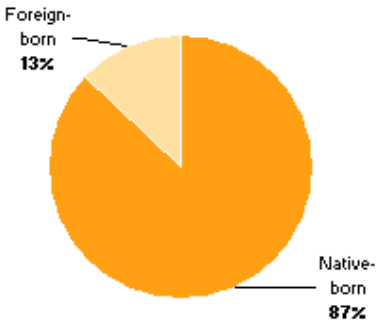
Work intensity



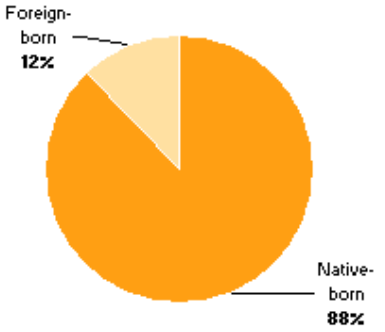
Employment status



Country of birth

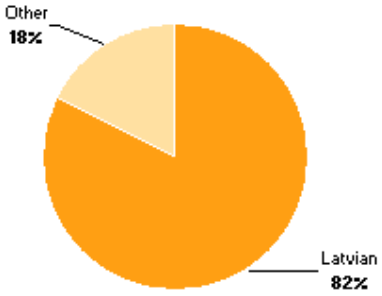


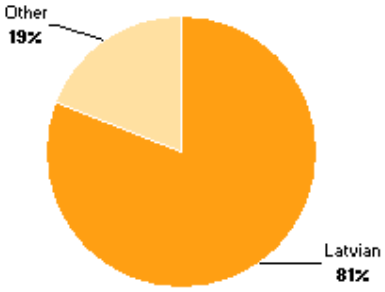
Total population



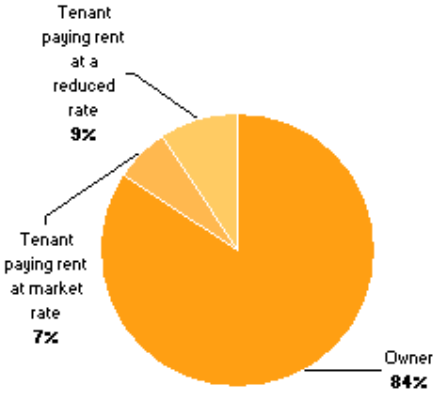
Population at risk of poverty

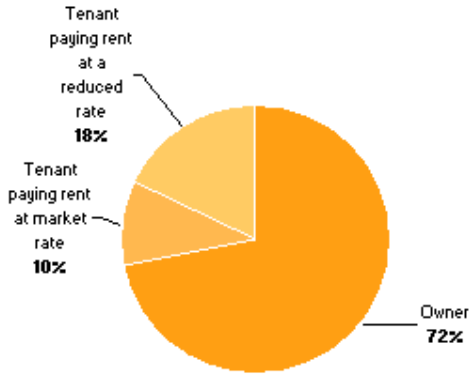
Citizenship



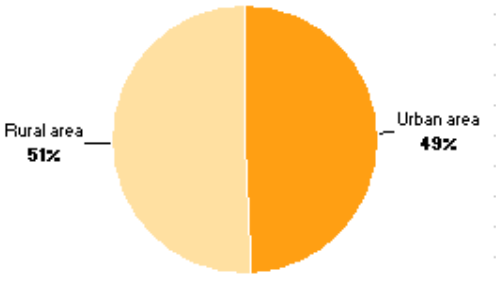


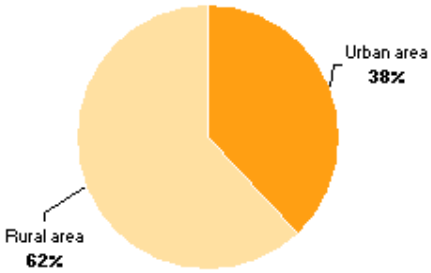
Tenure status





Degree of urbanisation





Source: Own calculations based on EU-SILC 2010

Table 8: Composition of the population and those at risk of poverty (%), 2006 and 2009

	2006		2009	
	Total population	*Population at risk of poverty*	*Total population*	*Population at risk of poverty*
Gender				
Men	46.1	42.1	46.1	46.9
Women	53.9	57.9	53.9	53.1
Age				
0-17	20.3	19.6	18.7	23.3
18-24	9.8	7.9	10.7	10.6
25-64	53.8	47.0	54.0	51.4
65+	16.1	25.4	16.6	14.6
Educational attainment				
Primary	27.4	44.2	26.8	42.3
Secondary	54.9	48.9	51.5	50.7
Tertiary	17.7	6.9	21.8	7.0
Household type				
Households without dependent children	*41.7*	*50.8*	*43.3*	*39.7*
Single person	9.6	26.8	10.7	17.5
Two adults younger than 65 years	9.3	8.7	9.9	8.2
Two adults, at least one aged 65 years or over	8.3	8.7	8.5	4.8
Other households without children	14.5	6.7	14.2	9.2
Households with dependent children	*58.4*	*49.2*	*56.6*	*60.3*
Single parent	5.5	9.0	5.7	10.9
Couple with one child	14.5	8.1	14.0	11.4
Couple with two children	11.5	8.9	11.0	9.5
Couple with three or more children	4.3	9.5	4.4	7.9
Other households with children	22.5	13.6	21.7	20.6
Work intensity of the household				
0.0-0.49	14.5	47.5	27.1	64.9
0.50	13.9	18.2	14.9	16.6
0.51-0.80	24.2	16.9	24.6	10.4
0.81-1.00	47.5	17.4	33.4	8.1
Employment status				
Employed	56.7	28.7	46.0	25.9
Unemployed	4.6	10.5	14.5	27.9
Retired	23.1	39.3	23.6	23.7
Other inactive	15.7	21.5	15.9	22.4
Country of Birth				
Native-born	86.8	84.3	86.9	87.8
Foreign-born	13.2	15.7	13.1	12.2
Citizenship				
with Latvian citizenship	82.1	81.2	82.3	80.8
with other citizenship	17.9	18.8	17.8	19.2
Tenure status				
Owner	84.4	74.2	84.1	71.6
Tenant paying rent at market rate	5.7	6.0	6.7	10.3
Tenant paying rent at a reduced rate or rent free	9.9	19.9	9.2	18.1
Degree of urbanisation				
Urban area	47.6	28.7	49.2	38.2
Rural area	52.4	71.4	50.9	61.9

Source: Own calculations based on EU-SILC 2007, 2008, 2009, 2010

The 'poverty gap' (the Laeken indicator termed the 'relative median at-risk-of-poverty gap') - measured as the difference between the median income of those below the poverty threshold and the threshold itself, expressed as a percentage of the threshold - indicates the extent to which the incomes of those at risk of poverty fall below the threshold. In policy terms, when combined with the at-risk-of-poverty rate it indicates the scale of transfers which would be necessary to bring the incomes of the people concerned up to the poverty threshold (by redistributing income from those above).

The median incomes of those below the poverty threshold of 60% of median income are, on average in Latvia, 30% lower than the threshold, i.e. below the minimum level of income regarded as being necessary to avoid relative deprivation. The poverty gap across the specific social groups analysed here varies from 6% (single elderly 65+) to 42% (tenants paying reduced rate) (see Poverty gap: the depth of poverty

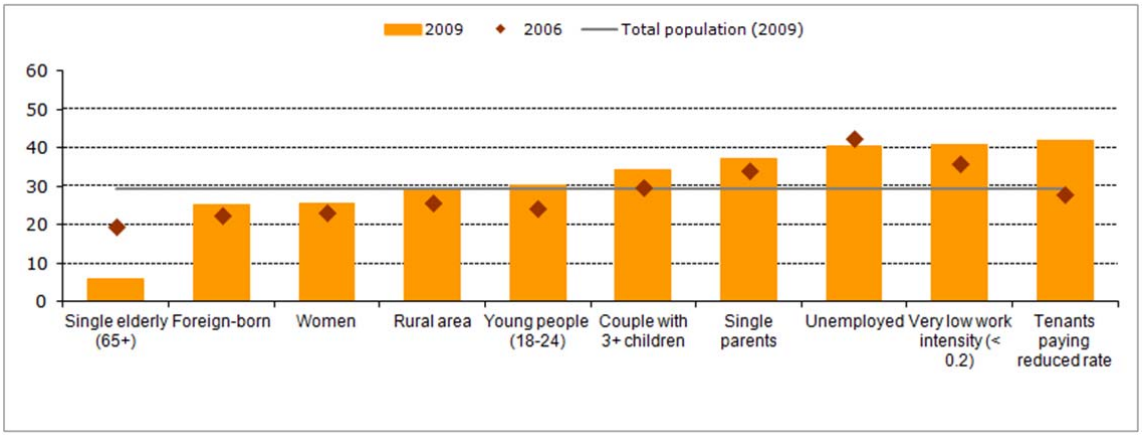
Figure 10 or for more details, see Table 9). Unemployed and individuals living in households with very low work intensity also have an outstanding poverty gap.

Changes between 2006 and 2009 indicate the deepening of poverty and increasing polarisation. Differences in the extent of poverty gap (the depth of poverty) were much smaller in 2006 than in 2009.

Note, however, that the at-risk-of-poverty gap indicates only the average income of those below the threshold; it says nothing about the distribution of income between them. Accordingly, the measure would not change if there was a transfer of income from the person with the lowest income level to someone with income just below the threshold, or vice versa.

2.4. Poverty gap: the depth of poverty

Figure 10: At-risk-of-poverty gap in Latvia (%), 2006 and 2009



Source: Own calculations based on EU-SILC 2007 and 2010

Table 9: At-risk-of-poverty gap (%), 2006-2009

	2006	2007	2008	2009
Total	24.6	28.6	29.0	29.4
Gender				
Men	27.2	27.4	31.3	32.4
Women	23.6	29.6	28.0	25.8
Age				
0-17	28.2	29.1	34.2	32.4
18-24	24.6	26.4	29.9	30.3
25-64	30.2	30.0	34.1	32.8
65+	18.7	27.3	25.0	9.7
Educational attainment				
Primary	24.5	30.1	29.1	30.3
Secondary	24.0	27.5	28.7	27.6
Tertiary	21.4	25.4	23.4	20.7
Household type				
Households without dependent children				
Single person	23.7	37.1	30.3	14.1
Single person younger than 65 years	36.4	44.5	41.9	39.7
Single person 65 years or over	19.8	35.5	28.3	5.9
Two adults younger than 65 years	29.6	28.1	36.3	48.1
Two adults, at least one aged 65 years or over	12.1	19.5	14.9	26.3
Other households without children	27.3	25.0	30.1	23.2
Households with dependent children				
Single parent	34.4	24.6	34.0	37.1
Couple with one child	27.6	31.0	27.4	38.1
Couple with two children	21.3	25.2	25.3	23.9
Couple with three or more children	29.9	37.4	43.8	34.5
Other households with children	22.6	26.8	27.4	30.8
Work intensity of the household				
0.0-0.49	36.1	41.0	45.1	40.9
0.50	22.9	24.5	27.3	22.5
0.51-0.80	21.3	19.7	25.0	21.1
0.81-1.00	21.1	16.9	22.0	20.4
Employment status				
Employed	24.5	24.4	26.3	27.1
Unemployed	42.8	38.4	37.0	40.4
Retired	20.2	28.6	25.7	12.7
Other inactive	32.8	33.0	35.6	32.7
Country of Birth				
Native-born	25.9	28.5	29.9	29.7
Foreign-born	22.8	29.6	27.0	25.4
Citizenship				
with Latvian citizenship	24.5	28.1	29.0	28.5
with other citizenship	23.4	29.7	27.5	25.4
Tenure status				
Owner	24.0	27.8	27.8	26.4
Tenant paying rent at market rate	29.0	27.4	27.7	31.2
Tenant paying rent at a reduced rate or rent free	28.2	35.7	40.9	41.9
Degree of urbanisation				
Urban area	21.6	26.6	26.4	29.6
Rural area	26.2	30.7	31.8	29.4

Source: Own calculations based on EU-SILC 2007, 2008, 2009 and 2010

2.5. Monitoring changes over time, using an anchored poverty rate

The 'at-risk-of-poverty rate anchored in 2006' is defined as the proportion of the population whose equivalized disposable income is below the 'at-risk-of-poverty threshold' that prevailed in 2006, adjusted only for inflation. This measures progress in poverty reduction compared to a standard of living that is fixed in real terms over time, and thus is an indicator of changes in absolute poverty. This is in contrast to the relative reference point of the standard EU risk-of-poverty indicator. For example, if all incomes doubled in real terms, the anchored poverty indicator would reflect a reduction in poverty, whereas the relative indicator would register no change at all in the poverty rate.

In Latvia, due to the rapid rise in average incomes in 2007 and 2008, followed by a drop in 2009, the at-risk-of-poverty threshold differs significantly from the anchored threshold (Table 10). In our view, using an anchored threshold is more suited to assess the situation of those on low incomes. Because the anchored measure is adjusted for inflation, it can also be considered as a measure to indicate the changing proportion of the population who can afford to purchase a fixed basket of goods and services.

Table 10: At-risk-of-poverty threshold (60% of median equivalized income) in Latvia in euro, 2006-2009

	2006	2007	2008	2009
At-risk-of-poverty threshold	2,010	2,899	3,284	2,722
Anchored threshold	2,010	2,226	2,586	2,674

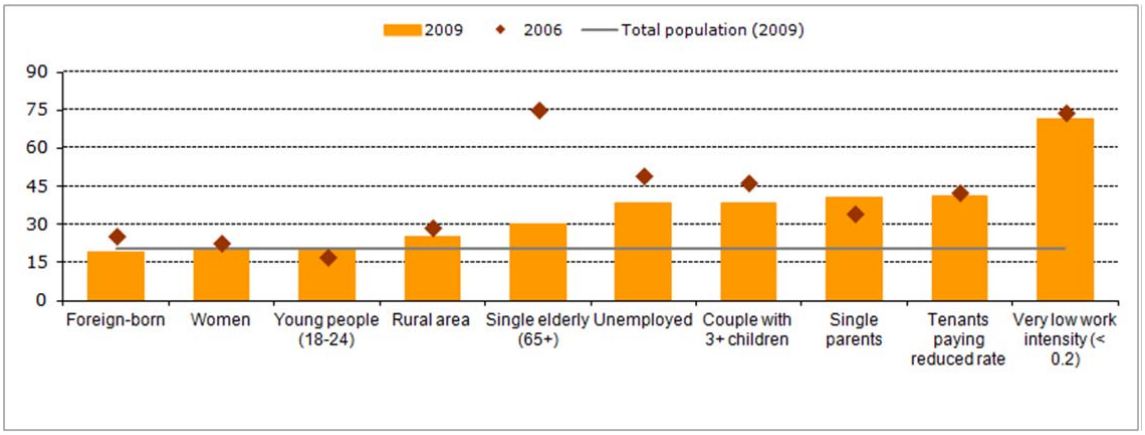
Source: Own calculations based on data retrieved from Eurostat database

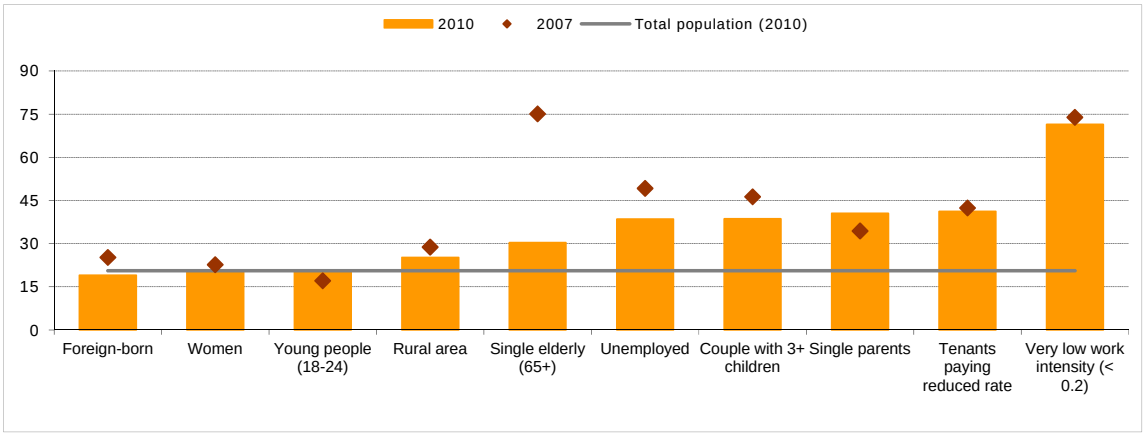
Using an anchored poverty rate, we find that the extent of poverty has somewhat increased among the unemployed and among couples with three or more children. The most marked change, however, is the improvement of the situation of single elderly.

The figures for the risk of poverty are normally presented as single values. But since they are based on the information collected from only a sample of households, they are inevitably subject to a margin of error, even if the sample concerned is intended to be representative of the population of the country. Unfortunately, we cannot estimate the exact value of the confidence intervals (the estimation based on the sample size alone is likely to underestimate it).

Using a poverty rate anchored in 2006 suggests that there was a recent increase in the extent of poverty (from 2008 to 2009),.Poverty in 2009 returned to its 2006 level, showing a U-shaped pattern during the four years analysed here.

Figure 11: At-risk-of-poverty rate anchored at a fixed moment in time (2006) (%), 2006 and 2009





Source: Own calculations based on EU-SILC 2007 and 2010

Table 11: At-risk-of-poverty rate anchored at a fixed moment in time (2006) with confidence intervals in Latvia (%), total population

	At-risk-of-poverty rate
2006	21.1
2007	15.5
2008	16.7
2009	20.6

Source: Own calculations based on EU-SILC 2007, 2008, 2009 and 2010

Although the extent of poverty on a national level is the same in 2009 as it was in 2006, using an anchored threshold (Table 11), there was a larger change in case of specific groups (Tables 12-13,

Figure 12).

There was a rise in the risk of poverty among single parents and young people between 2006 and 2009, using an anchored poverty rate (Table 12). In contrast, poverty declined among the unemployed, couples with three or more children, women, single elderly, those living in rural areas and the foreign-born population.

Table 12: At-risk-of-poverty rate anchored at a fixed moment in time (2006) with confidence intervals (%), 2006 and 2009

	2006	2009
	At-risk-of-poverty rate	At-risk-of-poverty rate
Foreign-born	25.2	19.0
Women	22.7	20.1
Young people (18-24)	17.1	20.5
Rural area	28.8	25.2
Single elderly (65+)	75.1	30.3
Unemployed	49.2	38.5
Couple with 3+ children	46.3	38.6
Single parents	34.4	40.5
Tenants paying reduced rate	42.4	41.2
Very low work intensity (< 0.2)	73.9	71.4

Source: Own calculations based on EU-SILC 2007 and 2010

The rise of poverty (using an anchored poverty rate) among both single parents or young people (aged 18-24) is due to a sudden rise in 2009, following a period of gradual decline since 2006 (Table 13 and

Figure 12).

The declining poverty seen among the elderly (aged 65 or over), appears to be a stable trend across the four years analysed here. The relatively large drop in the poverty rate for this group in 2009 is explained by increasing, pension incomes compared to the drop in median incomes (see also retired).

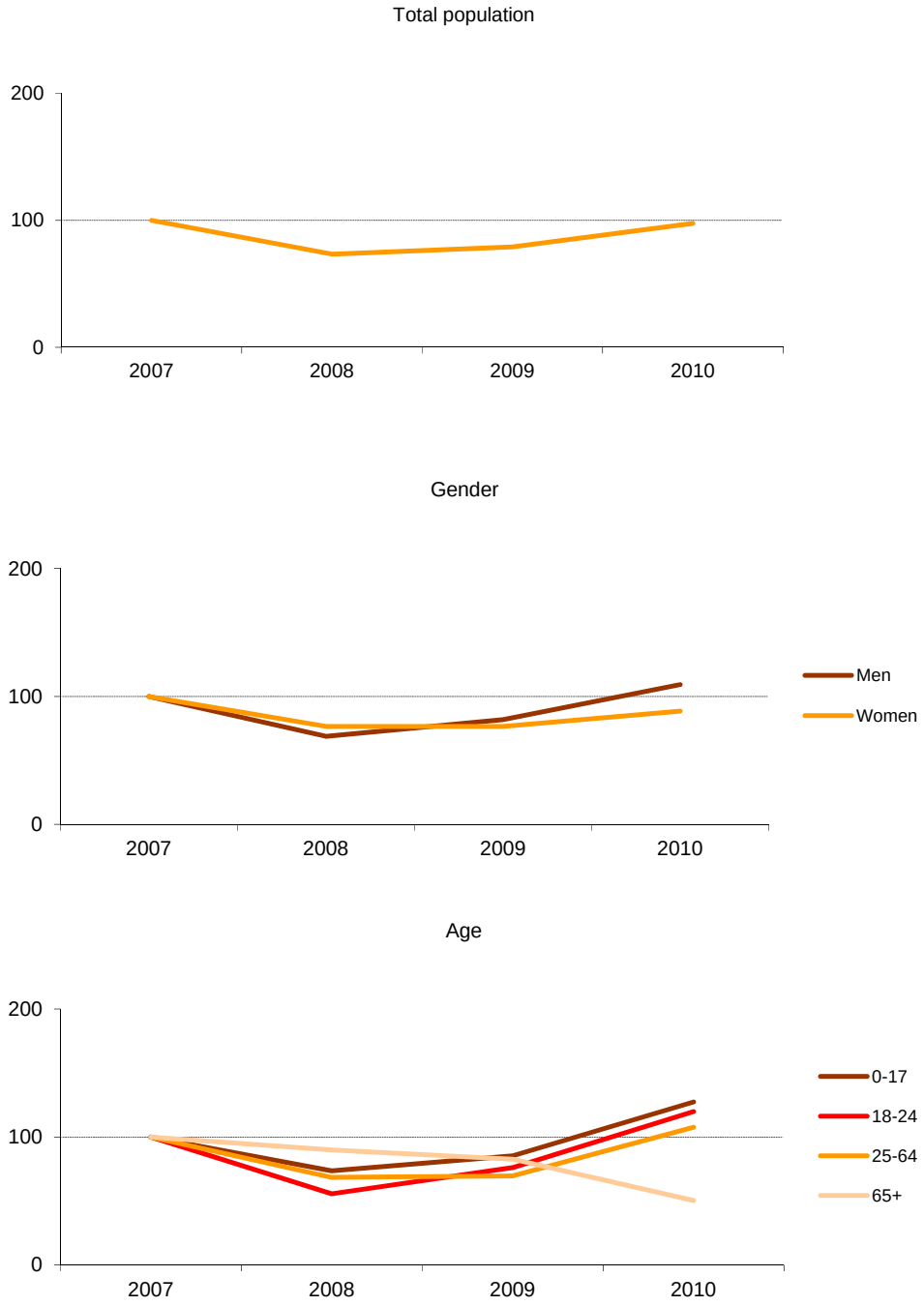
The trend in the poverty risk of women, large families (couples with three or more children), the unemployed seems to show a U-shape, with somewhat lower rates in 2009 than in 2006, using an anchored poverty line.

Table 13: At-risk-of-poverty rate anchored in a fixed moment in time (2006) (%), 2006-2009

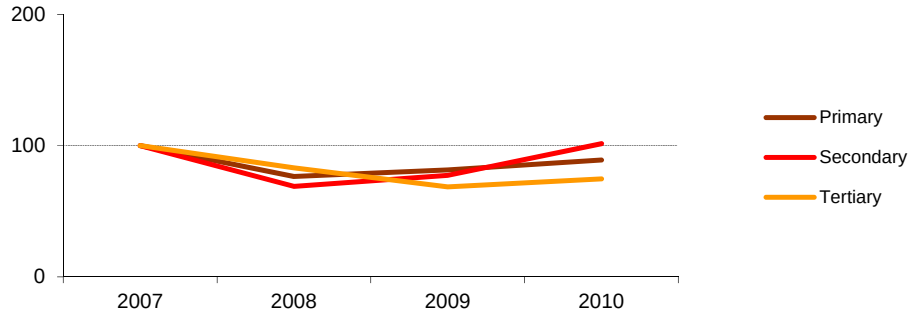
	2006	2007	2008	2009
Total	21.1	15.5	16.7	20.6
Gender				
Men	19.3	13.3	15.8	21.1
Women	22.7	17.4	17.4	20.1
Age				
0-17	20.4	15.0	17.4	26.0
18-24	17.1	9.5	13.0	20.5
25-64	18.4	12.6	12.8	19.8
65+	33.4	30.0	27.6	16.8
Educational attainment				
Primary	34.5	26.4	28.1	30.7
Secondary	19.0	13.1	14.7	19.3
Tertiary	8.3	6.9	5.7	6.2
Household type				
Households without dependent children				
Single person	59.0	48.0	44.7	31.9
Single person younger than 65 years	44.3	31.4	30.1	33.4
Single person 65 years or over	75.1	65.6	60.1	30.3
Two adults younger than 65 years	19.7	12.1	13.5	17.4
Two adults at least one aged 65 years or over	22.2	19.1	15.1	11.6
Other households without children	9.8	6.2	9.8	13.4
Households with dependent children				
Single parent	34.4	23.0	29.1	40.5
Couple with one child	11.8	7.8	8.9	16.9
Couple with two children	16.4	11.9	12.2	18.2
Couple with three or more children	46.3	26.0	35.8	38.6
Other households with children	12.8	9.9	10.4	19.4
Work intensity of the household				
0.0-0.49	57.8	48.2	50.4	51.5
0.50	22.6	17.3	16.6	23.0
0.51-0.80	11.9	4.4	8.1	8.9
0.81-1.00	6.4	3.3	4.0	5.1
Employment status				
Employed	10.9	6.2	6.6	11.0
Unemployed	49.2	28.8	25.4	38.5
Retired	36.4	33.2	29.2	18.6
Other inactive	29.3	21.0	22.3	28.2
Country of Birth				
Native-born	20.5	14.9	16.2	20.8
Foreign-born	25.2	19.4	19.6	19.0
Citizenship				
with Latvian citizenship	21.2	15.0	16.4	19.3
with other citizenship	22.5	19.1	17.8	20.9
Tenure status				
Owner	18.5	14.1	14.7	17.3
Tenant paying rent at market rate	22.3	15.4	19.7	32.5
Tenant paying rent at a reduced rate or rent free	42.4	32.1	39.6	41.2
Degree of urbanisation				
Urban area	12.7	10.2	11.9	15.8
Rural area	28.8	20.7	21.5	25.2

Source: Own calculations based on EU-SILC 2007, 2008, 2009 and 2010

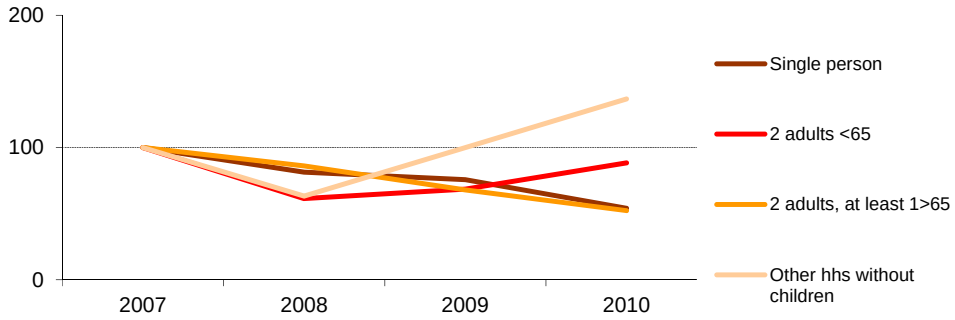
Figure 12: Trends of at-risk-of-poverty rates anchored at a fixed moment in time (2006) for specific social groups, 2006-2009



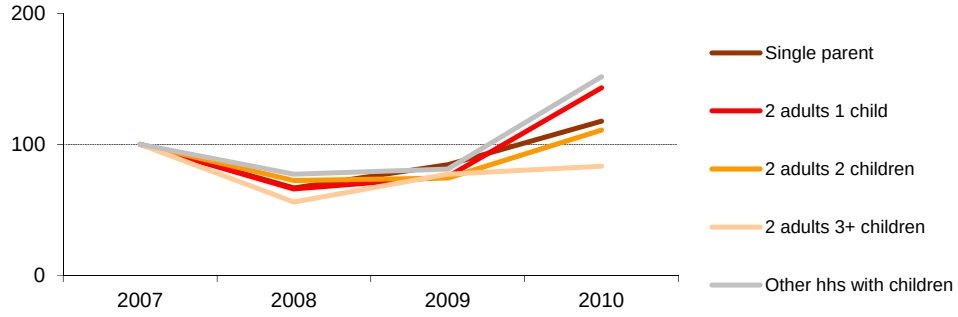
Educational attainment



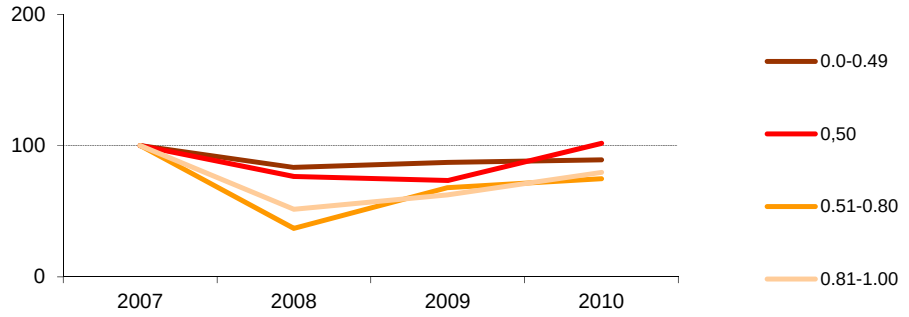
Households without children



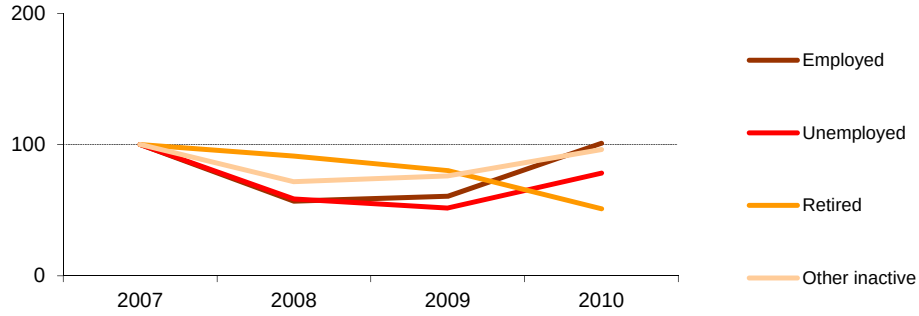
Households with children



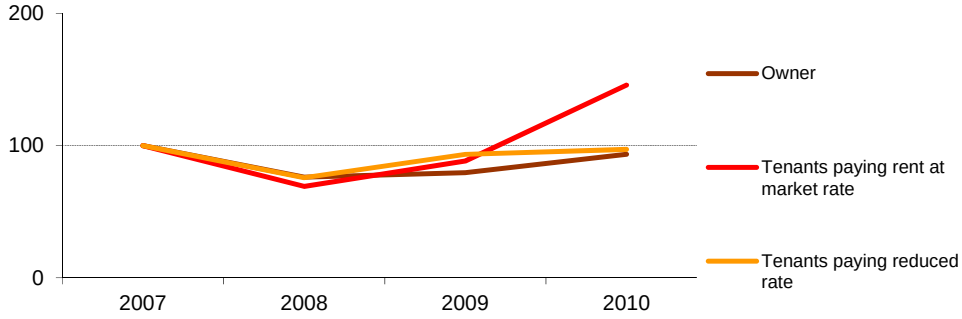
Work intensity of the household

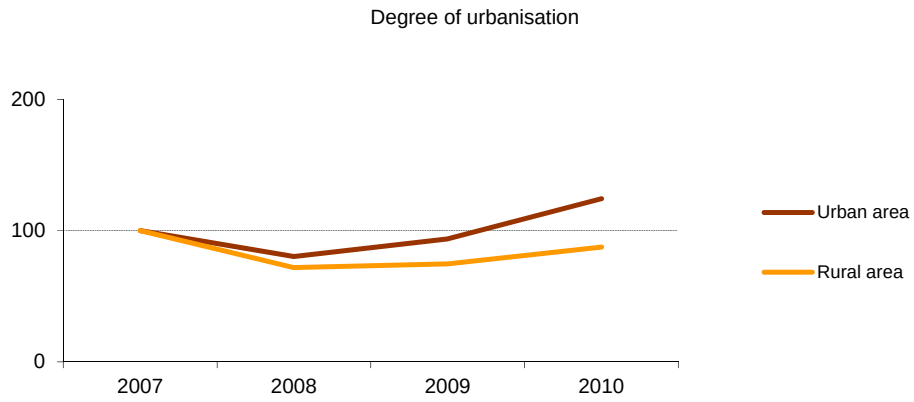


Employment status



Tenure status





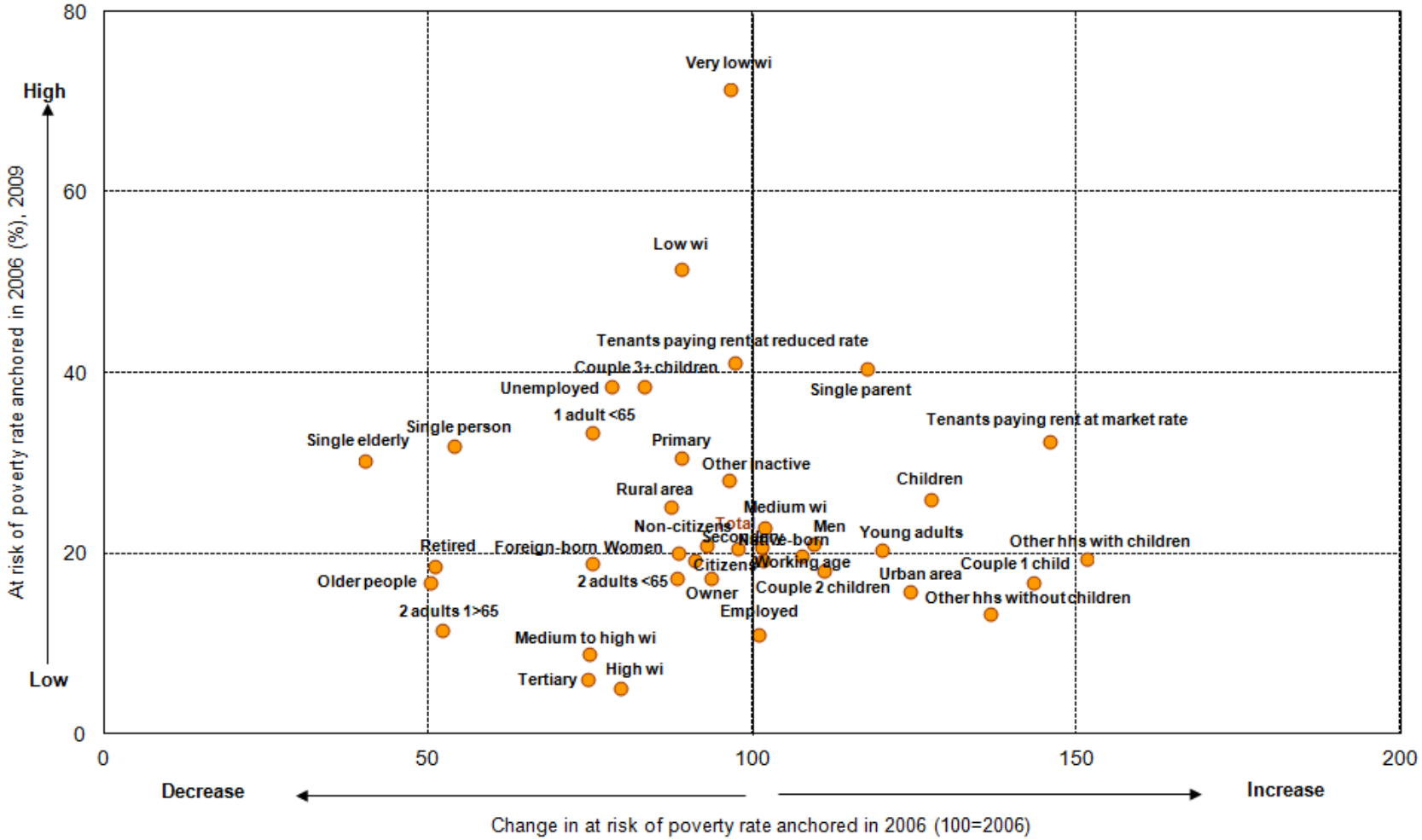
Source: Own calculations based on EU-SILC 2007, 2008, 2009 and 2010

Who are the main losers of the crisis? Which groups benefitted relatively from a declining exposure to poverty? What is the poverty level of these groups? Has poverty declined most among the high-risk groups? Has it increased most among the low-risk groups? Is there any link between the level of poverty and change over time? In our overview chart we are using the anchored poverty rate for monitoring the impact of the crisis on poverty. We present the poverty rate and changes over time for the period 2006-2009.

As shown by Figure 13, there is no consistent relationship between a group's level of poverty in 2006 and its change between 2006 and 2009. There was no major change in the situation of individuals with the highest poverty rate, i.e. those who live in households with very low or low work intensity. Among the high-risk groups, the situation of single parents and that of tenants paying a market rate worsened from 2006 to 2009, while the situation of unemployed, single persons (including both those over 65 and below), improved over time. Among those with a relatively lower risk, the poverty rate of older people declined, while those living in urban areas increased.

In sum, during the period between 2006 and 2009, the poverty risk of children, young adults, single parents, tenants paying a market rate, those living in urban areas increased to a large extent. In contrast, there was an improvement (declining poverty rate) among older people, people living alone (including both those over 65 and below), people living in households with high work intensity, and the foreign-born population.

Figure 13: "Winners and losers of the economic crisis". Changes in the poverty rate (using an anchored poverty threshold) and the level of poverty before the crisis



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Scientific research: Latvia: "Who is Unemployed, Inactive or Needy? Assessing Post-Crisis Policy Options"

An Evaluation of Active Labor Market Programs (ALMPS) and Related Social Benefit Programs

Mihails Hazans and Jekaterina Dmitrijeva

June 2013

INVESTING IN YOUR FUTURE!

European Social Fund Activity
„ Complex support measures" No. 1DP//1.4.1.1.1./09/IPIA/NVA/001

An Evaluation of Active Labor Market Programs (ALMPS) and Related Social Benefit Programs[♣]

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This paper evaluates the employment effects of unemployed training provided by Latvian State Employment Agency (SEA) in 2008-2011. Using full set of SEA administrative records, as well as monthly records of State Social Insurance Agency for the period between January 2005 and August 2012, allow for observing unemployment, employment and earnings history for all individuals both before and after the training. Moreover, we use very detailed information on type, content and duration of training. We focus on three main types of training: (i) Occupational Training (43 narrow programs); (ii) Informal Education Programs (classroom training aimed at enhancing universal skills; 18 narrow programs); (iii) Employer Provided Training (training in profession at employer's firm; 13 narrow programs). Both parametric methods and propensity score matching estimates are used for evaluation. Our findings suggest that professional training and informal education programs for unemployed significantly improve participants' employment rates—both soon after training completion and in the medium term, although substantial variation in terms of efficiency is found both between types of programs and within each type. We have identified the best-performing programs for men and for women in general, as well as for vulnerable groups (low-educated youth and unemployed aged 50+ with disabilities). However, the effect on earnings is either non-significant or slightly negative for classroom training and highly negative for employer provided training programs. In fact, the participants of Employer Provided Training who keep their jobs have much lower wages than otherwise similar participants of other programs or non-participants; for females, these programs also do not show a long-term effect on employment. We conclude that there is no case for general expansion of subsidized employer provided training in Latvia. Short (non-training) measures to improve competitiveness of the unemployed are found to have a small, but statistically significant, positive effect on employment; they to some extent complement but cannot substitute for training. On the other hand, training complements and partly substitutes short measures.

[♣] This paper has been prepared as a part of the World Bank study "Latvia - Who is Unemployed, Inactive or Needy?". We thank Irina Mozhajeva for excellent research assistance.
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1. Introduction

This paper looks at the main types of active labor market programs (ALMPs) implemented by the Latvian State Employment Agency (SEA) in 2008-2011. We analyze three broad types of training programs: classroom training in profession (Occupational Training), professional training at employer's enterprise (Employer Provided Training) and [mostly] classroom training in 'universal' skills (language, IT, project management, driving, etc.) outside formal education system (Informal Education Programs).

We seek to answer the following questions:

(i) Which programs, if any, helped to improve subsequent labor market outcomes of the individuals who completed these programs (further referred to as *treated* or *trained*) in comparison to otherwise similar untreated unemployed?

(ii) How do different types of programs (Occupational Training, Employer Provided Training and Informal Education Programs) differ from each other in terms of their performance? In particular, does Employer Provided Training perform considerably better than the traditional (out-of-the-job) occupational training?

(iii) How do different programs within each type (e.g. training in different occupations, or informal education in different languages or at different levels) differ from each other in term of their performance?

(iv) How does the impact of training programs on labor market outcomes compare to the impact of non-training (short and cheap) measures to improve competitiveness of the unemployed ("Short ALMPs" hereafter)? Can Short ALMPs substitute training? Are Short ALMPs and training programs complementary?

Two administrative data sources are used to conduct the study: information related to spells of registered unemployment and participation in SEA training programs is provided by SEA administrative records, while State Social Insurance Agency (SSIA) monthly records are used to construct full employment history between 2005 and 2012 for all individuals. Similar data (individual records from administrative source) have been recently used to evaluate the effects of unemployed training in Germany by Lechner et al. (2011), Biewen (2013), Osikominu (2013).

The context of the study is the one of the crisis and post-crisis labor market, with extremely low labor demand (Hazans 2013). In such a context, training of the unemployed has to be considered largely as a long-term human capital investment, as discussed by Lechner and Wunsch (2009) and Osikominu (2013) among others. Therefore, unlike most evaluation studies which, due to data limitations, consider only short-term effects of training (like outflows from registered unemployment to jobs), we look at the outcomes at horizons from 6 to 24 months after training[1]. For this purpose, the SEA data have been combined, at the individual's level, with the State Social Insurance Agency (SSIA) monthly records covering the period from January 2005 to August 2012 (for those never employed during this period, we have information on their last job (if any) in 1996-2004). Thus, we are able to observe individual's official employment and earnings history, as well as registered unemployment history, both before and after the training.

Moreover, we look at a wide range of outcomes: exit to jobs, exit to "stable" jobs, employment at a given horizon, earnings, total time worked, etc. Most of these outcomes would not be possible to evaluate within the

[1] Lechner et al. (2011) also focus on the long run effects of publicly provided training (at even longer time horizons) using a rich dataset of German data.

traditional approach when only SEA data (even amended with the 6 months post-unemployment history obtained from SSIA or the State Revenue Service) would be used. For instance, it would be impossible to distinguish an individual who found a job 5 months after completion of the training, but lost it 2 or 3 months later, from an individual who stayed at this job for at least a year. From this perspective, *employment rates* (rather than traditionally used exit-to-job rates) at different horizons after registering at SEA (or after completing the training) are particularly useful. This is especially the case when programs with mandatory post-training period of employment (e.g. Employer Provided Training programs included in our analysis) are considered.

The crisis context has also changed the meaning of so-called lock-in effect, when during the training period (or even while waiting for the training to start) unemployed engaged in ALMP are not looking for jobs (or search less intensively), and this postpones their exit to job. On one hand, due to explosive increase in unemployment waiting lists for training became very long. In fact, 58% of unemployed who benefited from informal education programs in 2088-2011 and 46% of those who completed occupational training waited more than 6 months for the training to start. On the other hand, in a period of extremely low vacancy level (see Hazans 2013) opportunity cost of waiting was low for all but the "very best" (most employable) unemployed; moreover, it is unlikely that total outflow to jobs would be significantly higher if training participants would not hope for training but try more intensively to find jobs directly during their first 6 months in registered unemployment[2]. Neither (but less importantly) would many of the [afterwards] trained outcompete, during their waiting period, those unemployed who really found jobs before the trained started training. The “early birds” among nonparticipants were most likely “better” than those who were selected for training (especially taking into account that during the crisis SEA tended to offer training to otherwise less employable clients - see World Bank, 2013). Table 1 illustrates.

[2] Similar reasoning can be found in Lechner and Wunsch (2009) who suggest that during recessions, job finding rate of non-participants falls thus reducing the cost of lock-in effect of training for participants. They argue that this link explains in part the positive relationship found between program efficiency and unemployment rate.

Table 1. Pre-unemployment characteristics of participants and non-participants in ALMP, 2008-2011

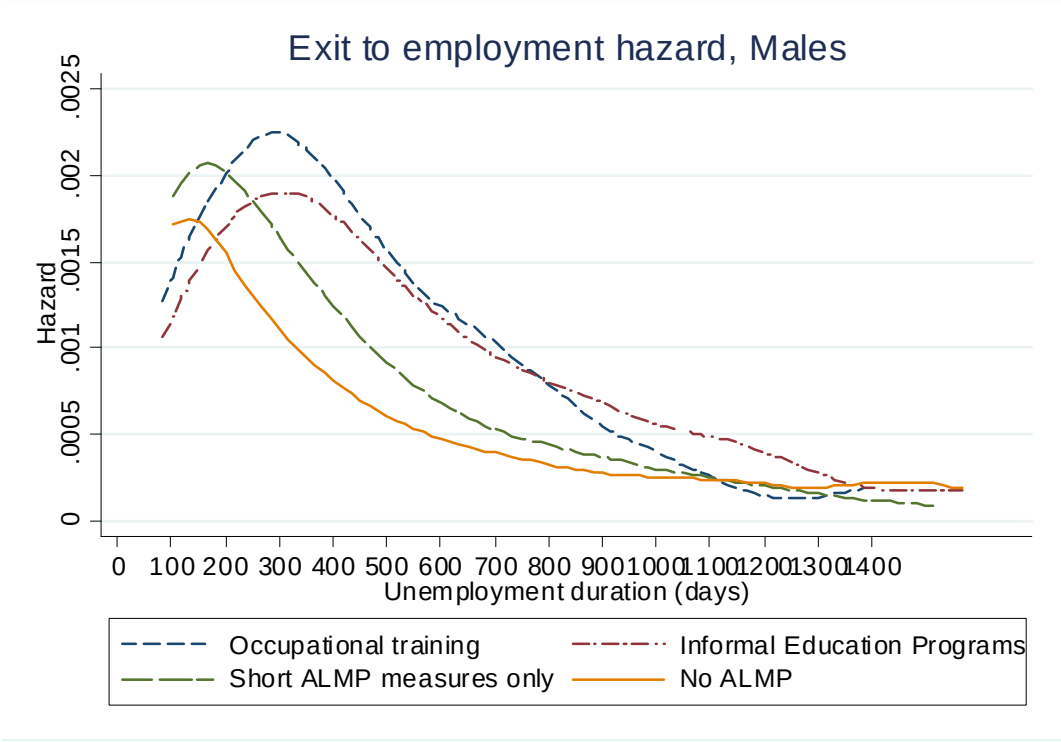
	Time since last worked (months)		Work experience since 01.01.2005 (months)		Total earnings during the last 12 months (Sept 2012 Lats)		
	Median	Mean	Median	Mean	median	mean	N
Trained:							
Occupational training	1.0	11.5	36.0	32.6	1500	2583	7870
Employer provided training	3.0	23.6	25.0	27.6	0	1418	909
Informal education programs	1.0	11.8	43.0	38.0	2100	3261	26678
Total	1.0	12.9	41.0	36.5	1956	3064	35457
Not trained:							
Job found within 3 months	1.0	7.8	38.0	37.0	2028	3156	66689
Job found within 4 to 6 months	1.0	6.5	41.0	38.9	2448	3838	46561
Total not trained 'early birds'	1.0	7.3	39.0	37.8	2196	3437	113250
Job not found in 6 months	1.0	18.5	35.0	32.4	1164	2649	248584

Note: The table includes only those registered unemployed who have been used for evaluation, either as treated or as controls, hence those who underwent several training programs are excluded. Not trained include those who underwent only short ALMP measures. Data refer to the first unemployment spell within given period.

Compared to participants in occupational training and informal education programs, the "early birds" among nonparticipants have, on average, by 4 to 5 months shorter duration of joblessness preceding the given unemployment spell, by 1 month longer work experience since 2005, and by 12% higher earnings during the last 12 months. Hence, a proper comparison would be not between the proportions of participants and nonparticipants who found jobs, say, within 15 , 18 or 24 months since registration (although even here results are good for many programs) but between chances (hazard) to find a job for participant and nonparticipant with similar duration of unemployment.

Figure 1 (upper panel) shows that among males, those who underwent occupational training outperform nonparticipants (respectively, participants in short measures) after 4 (respectively, 6-7) months of unemployment, while those who completed informal education programs outperform non-participants (respectively, participants in short measures) after 6 (respectively, 9) months. Similar results hold for females (Figure 1, lower panel), as well as when only outflows to jobs lasting at least 3 months are considered (Appendix B, Figure B.1).

Figure 2. Exit to employment hazard by time since registration at SEA



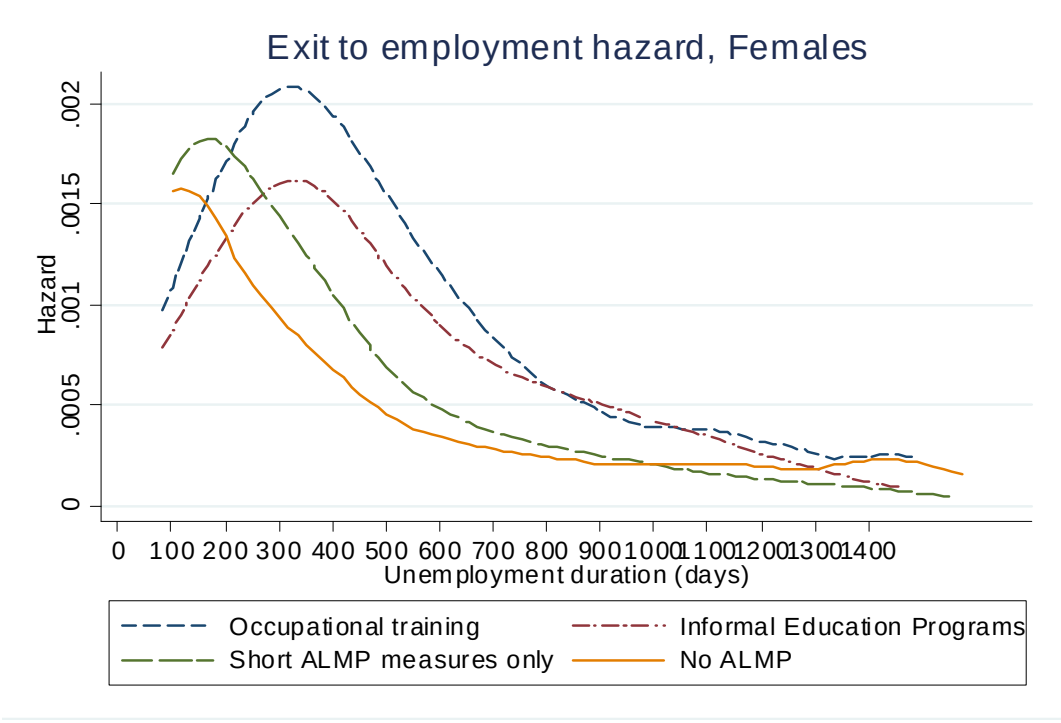
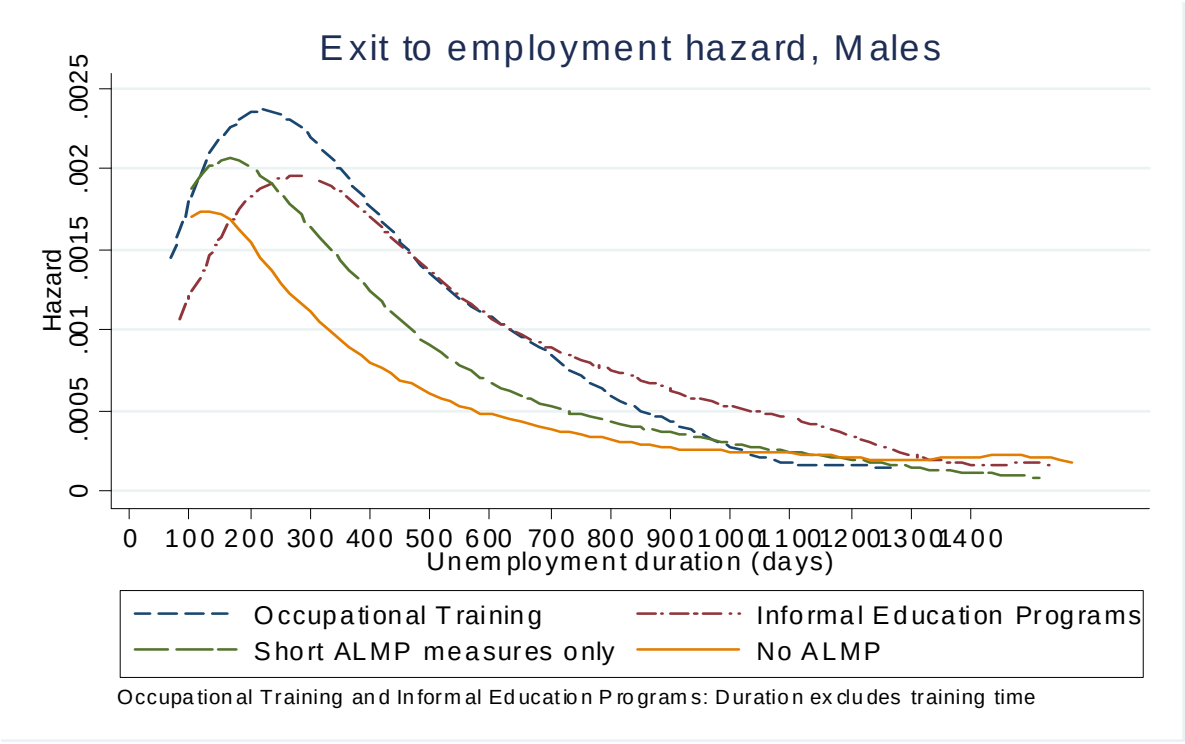
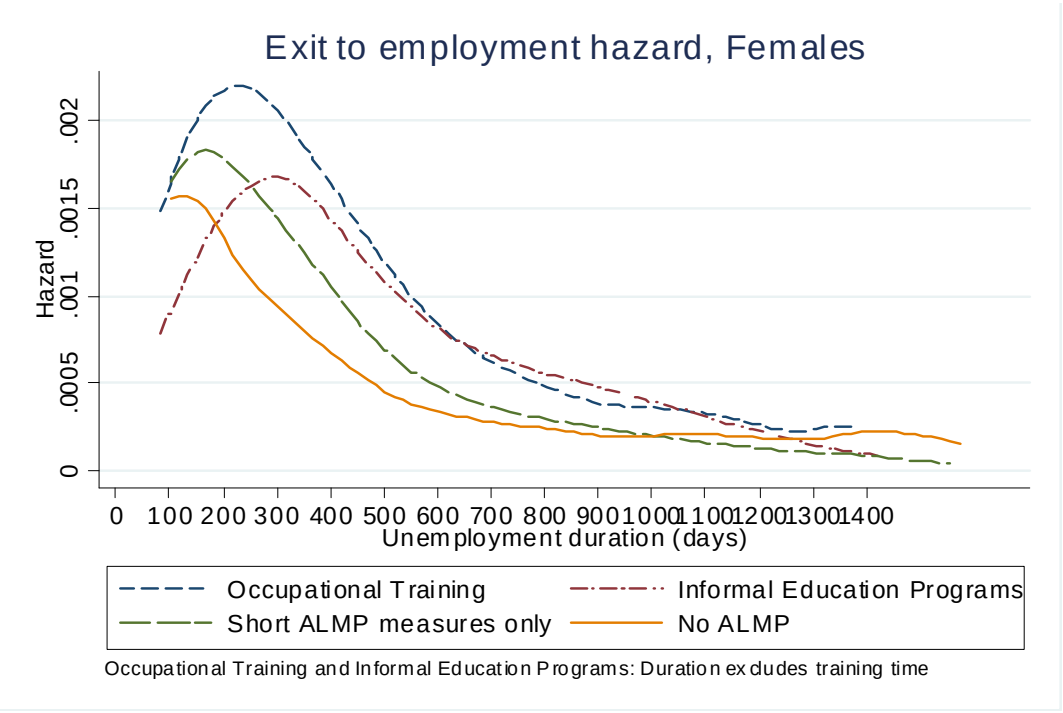


Figure 2 shows that when training time is excluded from the duration of unemployment (as is often done in the literature), the positive impact of training and informal education programs on outflow to employment shows up without any delay.

Figure 3. Exit to employment hazard by unemployment duration excluding training time (if any)





These findings suggest that while short measures to improve competitiveness of the unemployed are useful, they cannot substitute training and education, especially in the longer term. As shown later, this claim stands true also when characteristics of the unemployed are accounted for.

2. Programs and participants

2.1. Programs

Our focus is on three main types of training programs provided by SEA (listed in Tables C1, C2 and C3 in Appendix C and referred to as “In scope” programs):

- Occupational training for unemployed and training for unemployed with coupon method (OT), allows either obtaining a new profession (vocational training and requalification) or upgrading skills in a current occupation (qualification improvement). Typical duration of training and requalification programs is 480, 640 or 960 to 1280 hours (which takes between 4 and 6 months), while skills upgrading programs take 160 to 320 hours (1 to 2 months). Educational programs are selected by SEA according to the demand in the labor market (inquired through employer's surveys). Since 2011, training programs are implemented by applying a method of training vouchers. Those are issued to eligible unemployed and can be used to undergo training with one of accredited training providers (the training should be conducted in the state language).
- Employer provided training leading to professional qualification (EPT), i.e. training (or informal education) at employer’s enterprise. After completion of the training the employer has to hire the trainee and employ her/him in appropriate occupation for at least 6 months.
- Informal education programs (IEP), include state and foreign language courses, IT and software training, training in business and record keeping, services, as well as car, bus or industrial/agricultural vehicles driving. Program duration is between 60 and 159 hours (usually implemented within 1 to 2 months).

Overall, our analysis covers 74 programs (OT - 43, EPT -13, IEP -18).

SEA offers to the unemployed also other employment measures:

- Other training, including E-training for disabled or persons after maternity, enhancing professional skills, further professional training and professional higher education programs, lifelong learning programs. These programs are out of scope of this evaluation.
- Short measures to increase competitiveness (MIC), which consist of different short courses, seminars, lectures (5-36 hours) and individual consultations offered to unemployed in areas such as CV writing, job-finding and interview skills, communications skills, networking, negotiation, motivation etc.

We do not distinguish different kinds of MIC; we do, however, evaluate their overall effect on each of labor market outcomes considered for those unemployed who have not completed training or informal education programs. On the other hand, most of the "in scope" programs participants underwent also MIC, and we try to evaluate net effect (value added) of "in scope" programs.

We restrict out analysis of training episodes to unemployed who obtained the status after 1 January 2008 and completed training by the end of year 2011, so that we analyze about 83% of all participations, which for in-scope programs makes almost 105 thousand participations and regards 77 692 registered unemployment spells.

2.2. ALMP participation

Table 2 reports that among over 775 thousand unemployment spells, registered in 2008-2011 and concerning over 539 thousands individuals, more than 70% were associated with participation in ALMPs of various types and 10% included a completed training program. Among analyzed training programs informal education (IEP) programs involve most of participants (73%), while every fourth participant is involved in occupational training (OT). The scale of employer provided training is rather small – in 2008-2011 around 1700 unemployed have completed this program.

Table 2. ALMP participation of registered unemployed

Spells with participation as % of total	Total	Year of inflow into unemployment			
		2008	2009	2010	2011
Spells with AMLP participation	72%	60%	77%	76%	73%
Spells with OT, EPT or IEP training completed in 2008-2011 :	**12%**	**12%**	**18%**	**15%**	**3%**
Occupational training of unemployed (OT)	2.9%	3.4%	5.0%	2.7%	0.6%
Employer-provided training (EPT)	0.2%	0.1%	0.3%	0.4%	0.2%
Informal education programs (IEP)	8.5%	8.2%	13.0%	11.8%	1.8%
Total number of spells considered	*755125*	*129862*	*228942*	*177379*	*141626*

Source: SEA data and own calculation.

Driven by massive inflows into unemployment, increase in ALMP funding compared to the pre-crisis period (see World Bank (2013)) and intensified efforts of SEA towards promotion of unemployed training, participation in such programs has increased over recent years as suggested by Table 3 below.

Table 3. ALMP participation of registered unemployed

Groups of programs	Number of participants, inflow in 2008-2012					
	Total	Inflow year				
		2008	2009	2010	2011	2012
All training programs (1) - (5)	858533	83381	222314	241852	193299	117687
In-scope training programs (1) - (3)	137718	8435	29352	51318	35880	12733
(1) OT : Occupational training for unemployed and training for unemployed with coupon method	31327	1886	9692	7553	8575	3621
(2) EPT: Employer provided training leading to professional qualification	2567	61	368	1087	1046	5
(3) IEP: Informal education programs	103824	6488	19292	42678	26259	9107
(4) Other programs [a]	24598	224	3590	8580	11064	1140
(5) MIC : Short Measures to improve competitiveness	696217	74722	189372	181954	146355	103814

Note: Participants who completed training in 2008-2011 are included. Participations are defined as participations per unemployment spell (i.e. statistics are not adjusted for double counting). [a] This includes subsidized employment (see World Bank (2013)), paid public works (see Azam et al. (2012); Hazans (2012); World Bank Human Development Network (2013)), special programs for the youth, E-training for persons with disabilities or after maternity, enhancing professional skills, further professional training and professional higher education programs, lifelong learning programs (see World Bank (2013) for details). *Source:* SEA data and own calculation.

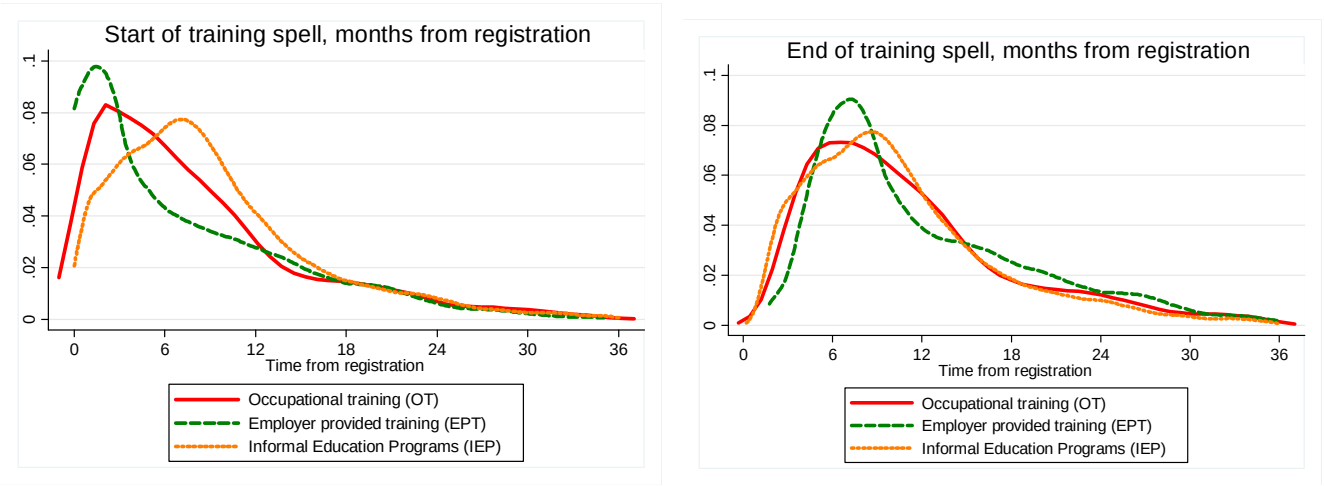
Overall, 99% of ALMP participations are considered as completed (no drop out), but this share varies significantly across program types and decreases with program duration : it is the lowest for IEP – that lasts about 6 months and the highest for training programs not in scope, that typically include one day consultations and career orientation sessions or non-training ALMP.

Figure 3 below shows the timing of training episode within the unemployment spell. More than half of OT and EPT participants and over 40% of IEP participants start training within 6 months from registration. Over three fourths of participants begin programs for all types of training within first 12 months of the spell.

The duration of training depends on program type (see table A.1. in Appendix for details): programs lasts below two months for almost all IEP participants (95%), from 1 to 3 months for the majority of OT participants (78%) and 5 to 6.5 months for most of EPT trainees (80%).

Roughly, one third of participants complete training within 6 months from inflow into unemployment, one third after a year spent in unemployment and 40 in between.

Figure 4. Distribution of spell duration at the beginning and at the end of training



Source: SEA data and own calculation.

Participation in short ALMP, usually occurs very early in the unemployment spell (Figure 4) : within the first month after registration for 58 percent of cases and within the first three months for 75 percent of participants.

Figure 5. Participation in short ALMP

Source: SEA data and own calculation.

2.3. Single and multiple participations

Among spells during which the unemployed took part in some ALMP, only 54% included a single ALMP, while 26% and 20%, respectively, are involved in two or more ALMPs. Short MIC account for 78% of single participations and appear in 93% of multiple participations.

Participations in OT, EPT or IEP are usually (94% of cases) combined with other measures: most often with short MIC (93% of multiple participations) and paid public works[3] (23%).

The case of public works requires careful interpretation: Persons engaged in paid public works are employed by ILO definition (and are considered as such if found among respondents of the Labor Force Survey). However, respective jobs are not market jobs, hence *participation in the public works is not considered as exit to employment* neither in SEA and MoW statistics nor in this study.

Furthermore, 13% of those trained have used the possibility to take up *short-term (up to 2 months) jobs without losing the status of unemployed*. Note that such jobs (which can be fixed-term or seasonal by nature or associated with a probation period) until now have not been included in SEA and MoW statistics on exits to employment; rather, they sometimes are referred to as a kind of activation measures. The reason is that, as long as the unemployed keeps his/her status, technically there is no exit from registered unemployment. However, from the employment perspective, being employed in a paid *market* job, even for one or two months, qualifies for exit to employment. Hence, we do account for these cases when calculating exit-to-job and employment

[3] See Azam et al (2012), Hazans (2012), World Bank Human Development Network (2013) on public works implemented in the crisis years in Latvia.

rates, hazards, etc. As a robustness check, however, we consider also exits to jobs lasting at least three consecutive months.

About one fourth (28%) of OT, EPT or IEP participants have completed (in 2008-2011) more than one of these ("in scope") programs. Typically, for these individuals time spent in training is longer when comparing to those who underwent just one training program. They are excluded from the final sample used for evaluation because it would be difficult to associate their post-training labor market outcomes with any one particular training program. Likewise, to avoid mixing up the effects of different programs, individuals who underwent a single training and some other "long" ALMP (such as paid public works, subsidized employment, etc.) are also excluded.

3. Sample design

We follow the cohort of 508 437 individuals entering registered unemployment in 2008-2011[4] - flow sample in the terminology of Lancaster (1990) – and consider, in the baseline calculations, the first spell of unemployment occurring in the indicated period[5]. Most of the results change little when all spells of eligible participants are included; these results are available on request.

The population is then split into two groups according to training participation status: *treated* if individual has completed OT, EPT or IEP program within this period; *untreated* otherwise.

The final sample for OT, EPT and IEP evaluation is constructed through a following procedure:

First, we discard individuals with other possible treatments, i.e. trained individuals who have completed more than one in-scope training program within the same unemployment spell (multiple participations) and all individuals (trained or non-trained) who have been involved in other important ALMP (subsidized jobs, etc.) with potentially significant impact on employment outcomes. Participation in short term Measures to Increase Competitiveness (MIC) is thus allowed for both treated and untreated populations as such programs are of a very short duration (one day in 90% of cases) and concern majority of unemployed (60% of those non-trained and 80% of trained).

Second, we also leave out untreated individuals who participate in training after the first unemployment spell. In fact, such participation will affect the employment and/or earnings outcomes, defined in this study for a period up to 2 years after the first registration with SEA.

Finally, we only consider individuals who have reached the working age (15 years).

[4] Our data cover also first eight months of 2012, but we do not consider entries after 1 January 2012 in order to have a sufficiently long observable period when constructing post-training outcomes.

[5] The single-spell framework is a standard approach in the literature dealing with flow samples (see e.g. Bonnal et al. (1997), Abbring and van den Berg (2003), Richardson and van den Berg (2006)). It has two advantages. First, using the first spell leaves more spells with observable outcomes (not right censored). Second, using multiple spells gives more weight to the least successful unemployed (i.e. those who repeatedly become unemployed). On multiple-spell framework, see Horny and Picchio (2010).

This leaves us with a sample of 399 928 individuals: 35 458 *treated* unemployed (9%) – participants in a single training program and 364 463 *untreated* individuals, where 134 481 (34%) have not undergone any ALMP and 229 989 (58%) have been involved in short term ALMP measures.

4. Outline of the analysis

4.1. Selection

We start by assessing participation decisions and analyze profile of individuals who choose or are chosen to participate in training. First, we compare the profiles of participants of the three broad groups of the training programs (OT, EPT and IEP), and the two control groups: "Short ALMP Measures Only" (unemployed who were subject only to short ALMP measures) and "No ALMP" (those who have not received any treatment).

Second, main determinants of selection (or self-selection) are discerned by estimating, separately for men and women, three selection equations, where the probability to undergo a training program (OT, EPT or IEP) is modeled conditional on a set of individual and socio-demographic characteristics (sex, age, region, education, work experience, language skills, participation in short measures, etc.). The models are primarily intended to generate scores for propensity score matching estimates of the effects of training on various labor market outcomes and should not be used for causal inference. They do, however, provide useful insights regarding the individual characteristics associated with higher (or lower) likelihood to participate in training programs.

4.2. Outcomes

Conceptually, we are interested in three broad types of outcomes for trained unemployed and their not trained counterparts. Firstly, for how long they stay jobless? Secondly, how stable are the jobs they find? Thirdly, how "good" are these jobs for the workers and for the society?

The answer to the first question can be provided in different well-known forms: unemployment duration and job finding rate (hazard) at various time horizons. Note, however, that our data allow using measures which are somewhat different from (and, we believe, more relevant than) those used in many other studies. We measure duration from obtaining the status of registered unemployed (hereafter loosely referred to as "registration") until a [legal[6]] job starts, disregarding whether or not the person in question held the status of registered unemployed immediately before or lost it some time ago. Put other way, we look at *duration of and exits from joblessness* rather than duration of and exits from [registered] unemployment.

Our preferred outcome indicators are employment rates (at various time horizons) which are easily interpretable (even by non-specialists) and characterize the combined result of job finding intensity over time and job stability. As an alternative measure, we use total time worked within a certain period. Finally, average [declared[7]] monthly earnings over months worked are used as a proxy for both private (via pay) and social (via productivity and taxes) value of the job.

[6] Only formal jobs, identified by social security contributions, are accounted for.
[7] I.e., excluding "envelope wages".

Formally, using SSIA monthly records, which provide full employment history between 2005 and 2012 for all individuals, we construct the following outcome indicators:

- **Employment** by time horizon (Y_h^1) : taking the value of 1 if the individual is employed in month h (since registration or since the end of training) and 0 otherwise. When aggregated accross participant and nonparticipant groups, this indicator provides employment rates in each group at various post-training or post-registration horizons h.

- **Transition (exit) to employment** by time horizon (Y_h^2) : taking the value of 1 if within time horizon considered (h months elapsed since registration or since the end of training) the individual starts a job, and 0 otherwise. When aggregated accross groups, this indicator gives the share of individuals in each group that have found a job within h months after training or registration.

- **Transition (exit) to employment lasting three or more months** by time horizon (Y_h^3) : taking the value of 1 if within time horizon considered (h months elapsed since registration or since end of training) the individual starts a job that lasts at least three months and 0 otherwise. When aggregated accross groups, this indicator gives the share of individuals in each group that have found, within h months after training or registration, employment lasting for at least three months.

- **Total time worked** within time horizon (Y_h^4): giving for each individual the employment duration (in full months) within time horizon considered (h months elapsed since registration or since end of training). This indicator combines information on both job finding and job stability and will be higher for those who found jobs earlier and stayed employed longer. When aggregated accross groups, this indicator gives the average number of months worked.

- **Average monthly earnings**, by time horizon (Y_h^5): informs on average monthly gross earnings of individuals over months worked within time horizon considered. Nominal wages earned in 2005-2012 are converted to real (expressed in Lats of September 2012). In order to focus on earnings differences separately from the speed of job finding, the indicator computes average earnings only for months worked (hence, individuals who have not worked during the given period are excluded).

To save space, we have not included [tobit] models regarding total time worked, although descriptive evidence on this indicator is provided. We have not included also results regarding total earnings during a given period (which is calculated for all individuals, with contribution of a month with no earnings being zero). These results are available on request.

We consider time horizons h of 6, 9, 12, 15, 18, 21 and 24 months. Naturally, the individuals for whom the outcome at a given horizon in not observable due to left censoring do not contribute to the construction of group aggregated statistics at this horizon. For example, given that we observe individuals until 12 September 2012, for an unemployed registered on 1st January 2012, outcome at 6 months will be observable but all further outcomes (9 to 24 months) will be not.

Two alternative measures of **time elapsed** are considered in the study:

- **Time elapsed since registration** for both treatment (T) and control (C) groups. When this definition is used the outcomes will be referred to as post registration (post-R) outcomes and comparison of all durations or outcomes at different durations across groups will englobe waiting (while waiting to enter the treatement), lock-in (while unemployed are in trainig) and post-treatement effects.

- **Time elapsed since the end of training** for treatment (T) group and time elapsed since registration for control (C) group. When this definition is used the outcomes will be referred to as post training (post-T) outcomes and comparison of all durations or outcomes at different durations across groups will focus on post-treatment effects.

Using these different approaches to timing, three alternative **measures of joblessness (unemployment) duration** can be defined:

- Duration (D^1) from registration until a job is found (or end of observation period).

- Duration (D^2) from registration until a job is found (or end of observation period), excluding (D^T) duration of training (if any), i.e. $D^2 = D^1 - D^T$.

- Duration (D^3) from registration for non-treated and from end of training for treated until a job is found (or end of observation period), i.e. $D^3 = D^1$ for the control group.

Thus post-registration outcomes are constructed using duration D^1 and post-training outcomes using duration D^3.

4.3. Estimation

We evaluate the effects of three main types of SEA training programs (Occupational training (OT), Employer provided training (EPT) and Informal Education Programs (IEP)) on various labour market outcomes (described above) using several alternative methods.

First, based on Roy (1951) and Rubin (1974) potential outcomes model we assess average treatment effect on the treated (ATT) by comparing mean outcomes of trained and untrained individuals when controlling for possible composition differences across these two groups. We start by analyzing the "naïve" estimator of ATT which is a simple difference between mean outcomes of two groups or an estimated coefficient of treatment indicator T_i on outcome variable Y_i in the equation (1).

$$Y_i = a + \beta_N T_i + u_i \quad (1)$$

Next, in order to remove the selection bias, we add a vector of different socio-demographic controls (X) to this specification and estimate equation (2), where coefficient β_P stands for a parametric estimate of ATT and the relationship between treatment and outcome is assumed to be linear:

$$Y_i = a + \beta_P T_i + X\gamma + u_i \quad (2)$$

This leads to linear probability models for employment and exit outcomes at various time horizons, and to (log) linear earnings equations for average monthly earnings during the employment periods. We also use

conventional probit models for binary outcomes such as employment in a given month or exit to employment within given horizon period. Likewise, relevant model for the total time worked or total earnings within a certain period would be tobit. Both for probit and tobit, the impact of training (ATT) is measured by the marginal effect of the treatment indicator T_i.

Furthermore, we use duration models to assess the effects on the job-finding time and on the hazard of exit to employment; using social insurance records (rather than just unemployment registry) enables us to capture job finding events ('exits') not only during the given spell of registered unemployment but also after it.

All these models allow not only assessing the impact of main types of training, but also comparing performance of broad categories of programs within types or of specific narrow programs, as well as evaluating the effects of other factors on the outcomes considered.

On the other hand, for each of these outcomes we provide alternative estimates based on nonparametric method of propensity score matching (PSM), which, under relevant assumptions allows for causal inference regarding the effects of training measures. PSM has been proposed by Rosenbaum and Rubin (1983) and extensively used for policy evaluation since[8]. The PSM-based ATT is defined as follows:

$$ATT = E_{\pi(X)|T=1}\{E[Y(1)|T=1,\pi(X)] - E[Y(0)|T=0,\pi(X)]\} \quad (3)$$

where $\pi(X)$ denotes the propensity score (estimated probability of treatment) which is used to find similar individuals in treatment and control groups and thus overcome the selection bias problem.

We concurrently use the following control groups:

- C_1 ("No ALMP") group, where individuals have not been involved in any ALMP.
- C_2 ("Short ALMP Measures Only") group, including unemployed who have not completed OT, IEP or IEP but have however been engaged in some short ALMP measure during the current unemployment spell. Participation in these measures concern 60% of all non-treated individuals, 80% of OT participants, 66% of EPT participants and 81 % of IEP participants.
- $C=C_1+C_2$ ("Combined control group"), with control for participation in short ALMP measures.

Using "No ALMP" group as control will overestimate the pure training affect as for treated ATT will combine training effect with (potentially positive) impact of short measures.

In contrast, using "Short ALMP measures only" group will underestimate the ATT of training, because some of the treated have not participated in short measures.

Working with two different control groups will allow establishing bounds for treatment effect. Alternatively, we use the "Combined control group" $C=C_1+C_2$ and control for participation in short ALMP measures among treated and non-treated. This approach however, also has its limitations as it neglects possible effect heterogeneity of short measures due to diversity in scope and combinations of the short measures received by the unemployed.

[8] See for example Sianesi (2008) for ALMP evaluation for Sweden, Hamalainen and Ollikainen (2004) for Finland, Caliendo et al. (2008) or Biewen et al. (2012) or Osikominu (2013) for Germany.

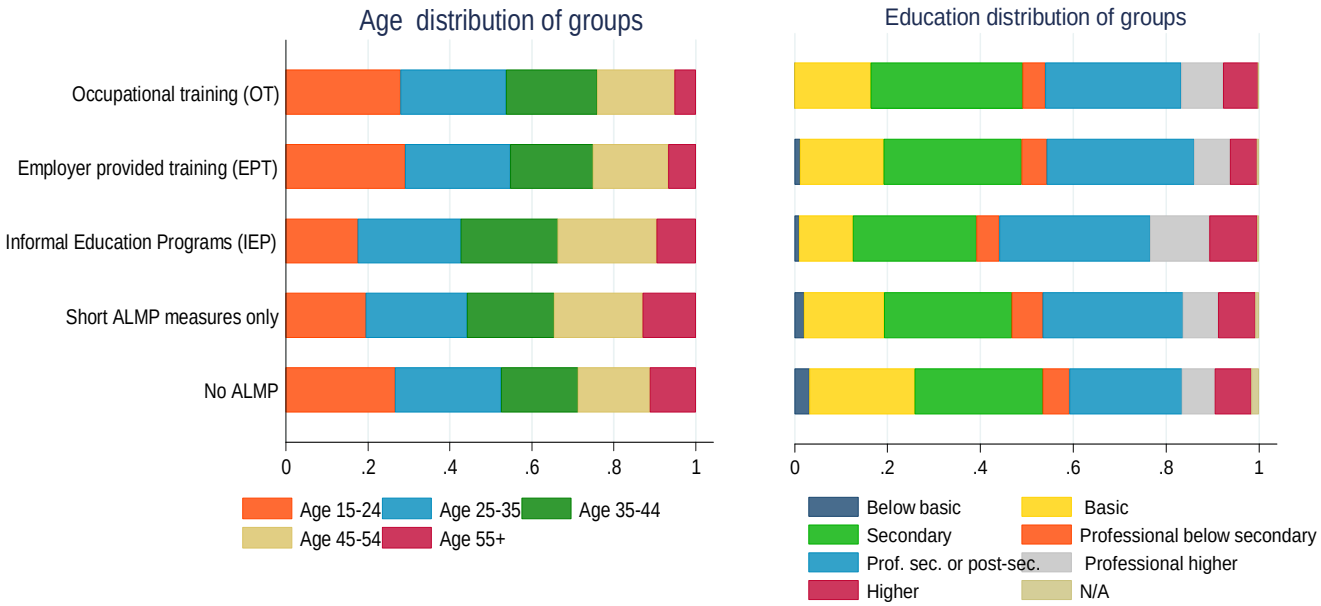
5. Selection into training

Using the sample described in section 3 above, we start the analysis by comparing the characteristics of participants of the three broad groups of the training programs (OT, EPT and IEP), and the two control groups ("Short Measures Only" and "No ALMP"). Table A.1 (Appendix A) provides details.

To begin with, the groups differ in terms of gender composition: proportion of females is 61% among participants of occupational training (OT), 57% among their counterparts in informal education programs (IEP), and 52% in employer provided training (EPT) programs. By contrast, in the control groups, less than half are females (49% of those who underwent only short measures and 46% of those without any ALMP exposure). In other words, the proportion of females tends to increase with intensity of training and (employer provided training aside) with its duration.

Figure 5 below compares the distributions of the above mentioned groups of unemployed in terms of age and education. OT and EPT are similar to the "No ALMP" group, as long as participation of young unemployed is concerned: in each of these groups persons younger than 35 years account for 53% to 55% of participants, including 27% to 29% aged 15 to 24 years. However, the share of persons aged 55 years or more is only 5% in OT programs but 11% in the "No ALMP" group. On the other hand, age composition of participants of informal education programs is very close to that of the "Short Measures Only" group: 18% to 20% are younger than 25, 25% aged 25 to 34, 48% in IEP and 43% in the "Short Measures Only" are between 35 and 54 years of age, while 10% in IEP and 13% of those who underwent only short ALMP measures are aged 55 years or more.

Figure 6. Age and education distributions of unemployed, by ALMP participation

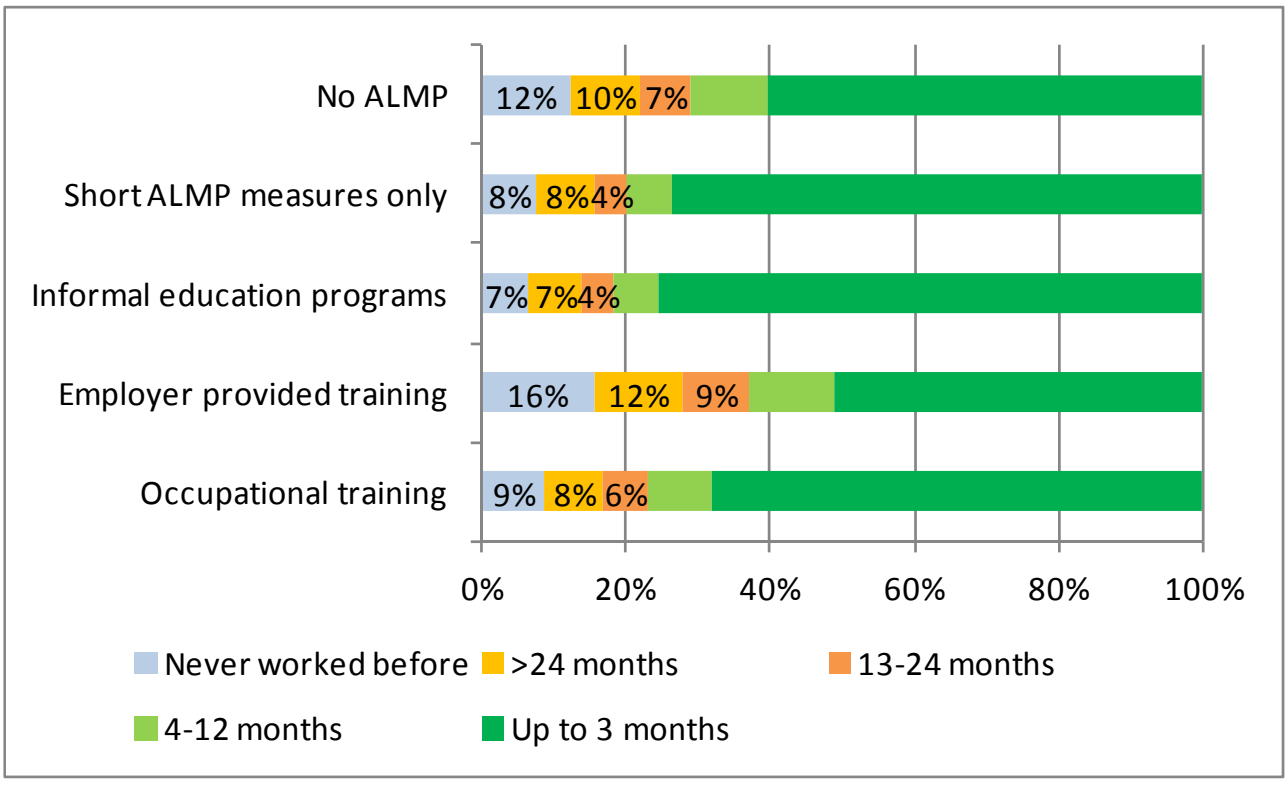


Source **:** Authors' calculations using SEA and SSIA data.

Informal education programs, compared to both other types of training and to control groups, attract more persons with tertiary education (23% vs. 15% to 17% in other groups) and less persons with just basic or lower education (one out of eight of IEP participants vs. one out seven in OT, one out of five in EPT and "Short measures only" and one out of four among those without any ALMP exposure).

In terms of previous employment history (see Table 1 above, Figures 6a, 6b below and Table A.1 in Appendix A), employer provided training programs stand out with the shortest recent work experience, the lowest previous monthly earnings, and the highest incidence of long (more than a year) period of joblessness prior to given unemployment spell (21% vs. 11% to 14% among other ALMP participants and 17% among non-participants), as well as the highest share of persons without any work experience (16%, as opposed to 7% to 9% in all other groups exposed to ALMP measures and 12% in the "No ALMP" group). On the other hand, participants of informal education programs feature the longest (and the most recent) previous employment record and have also earned the highest wages before unemployment occurred. Previous employment record of participants of occupational training seems to be, on average, slightly worse than that of participants of only short ALMP measures but somewhat better than that of the "No ALMP" group.

Figure 7a. Time since last worked at the start of unemployment spell, by ALMP participation

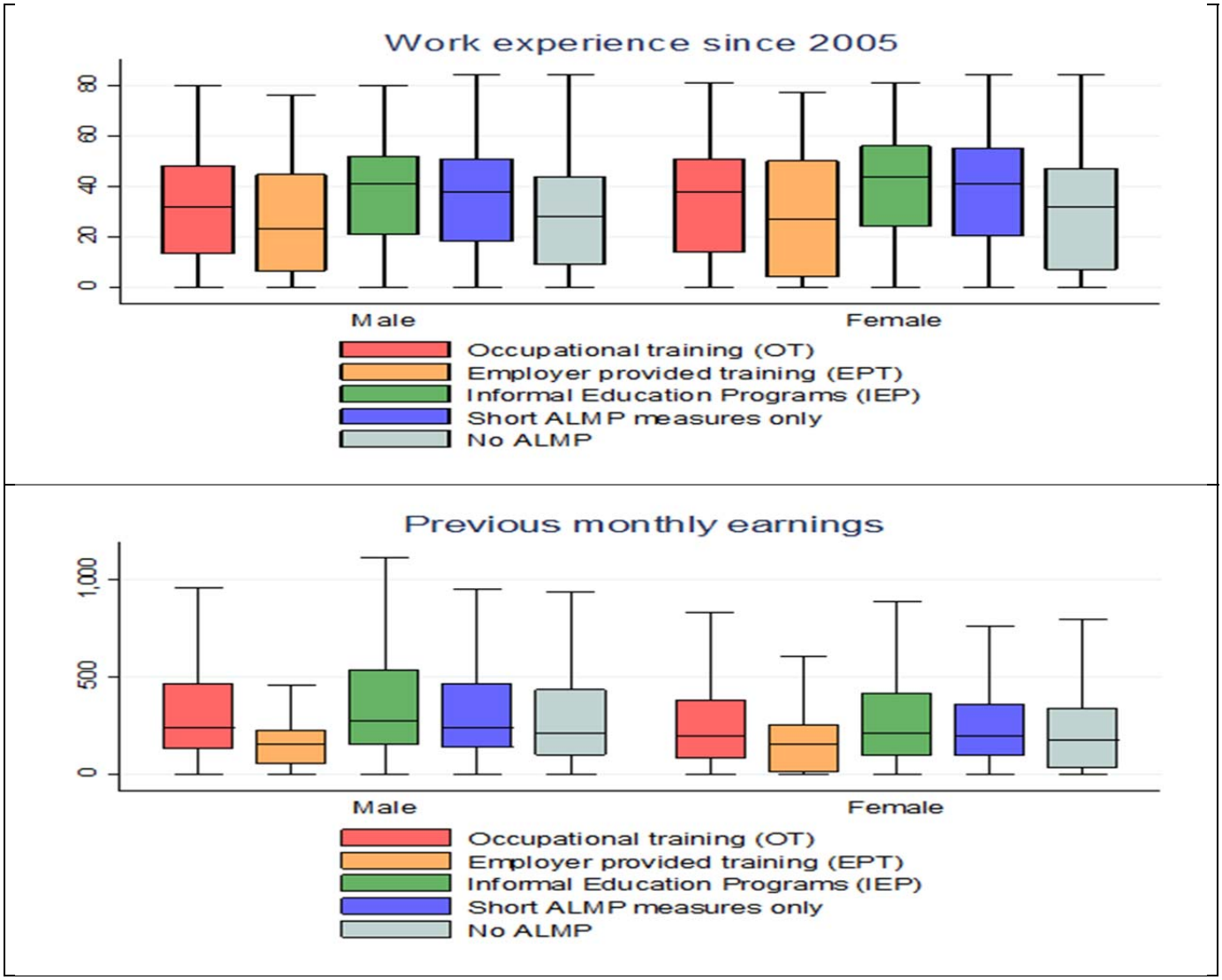


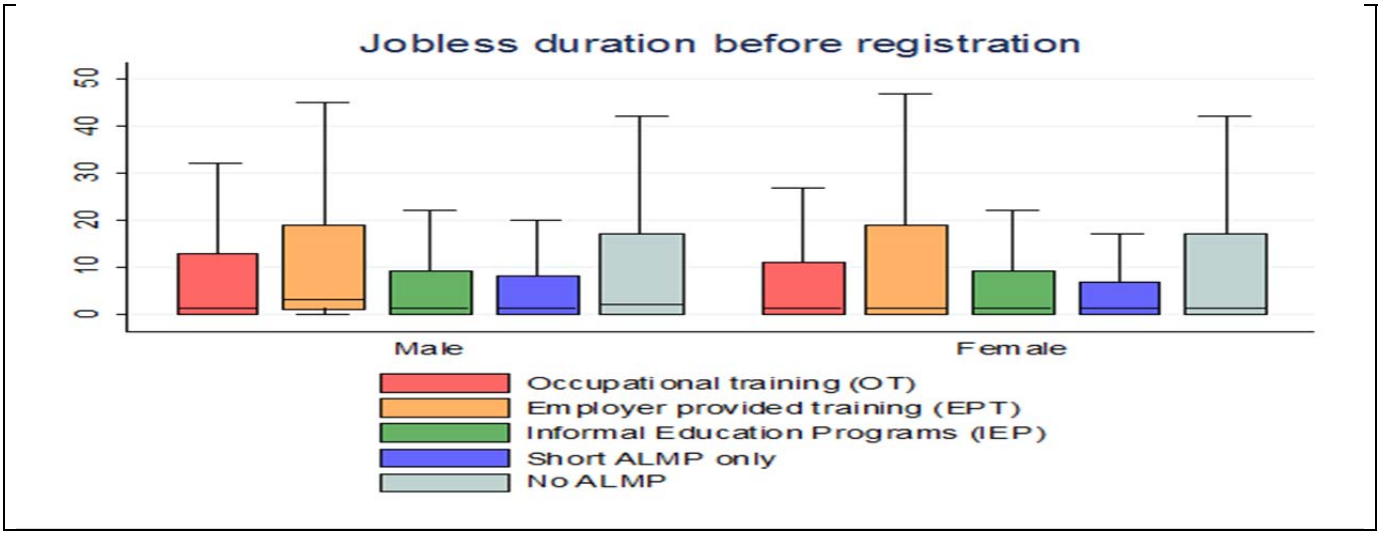
Source **:** Authors' calculations using SEA and SSIA data

Given that OT and IEP programs are provided only in the state language, it should not come as a surprise that those with no certified Latvian language skills or with the lowest grade account for 24% of the "No ALMP" group, for 19% among participants of only short ALMP measures, but for just 6.4% of participants in occupational

training (Table A.1) and also for 6.4% among beneficiaries of informal education programs other than in state language.

Figure 8b. Previous employment of unemployed, by ALMP participation and gender





Source **:** Authors' calculations using SEA and SSIA data.

We proceed with analysis of selection into training programs by estimating the probability of training conditional on individual and socio-demographic characteristics such as age, sex, education level, region (SEA branch) and previous employment history. For each of the three types of training (OT, EPT and IEP), we estimate binary outcome (probit) models (with participation status as dependent variable) for males, females, as well as for both genders together. For each program type, the sample excludes those trained in other programs (in order to get a clean control group for PSM). Also excluded are categories (in most cases, based on previous occupation) with no participation (i. e. those predicting failure perfectly), hence the samples differ by program type. Note also that the samples are restricted to individuals which registered at SEA and (if trained) completed training at least 18 months before the end of the observation period. These restrictions, however, do not change the participation patterns significantly. The models are primarily intended to generate scores for propensity score matching (PSM) estimates and should be interpreted with caution[9].

The results are displayed in Table A.2 in the Appendix A. Moreover, Figure 7 (respectively, Figure 8) present predicted probabilities of training participation for males and females depending on education level (respectively, ethnicity, citizenship and state language skills). For each gender and type of training, the differences between probabilities across education levels (respectively, across groups based on ethnicity and citizenship or state language skills) coincide with the marginal effects reported in Table A.2.

Other things equal, the participation in training is higher among females (Table A.2, panel "Both genders"). This effect is very significant for occupational training and informal education programs (in both cases, the size of the effect is roughly 1 percentage point; in relative terms, thus, the effect is stronger for OT). For employer provided training, the gender effect is only marginally (at 11% level) significant and small.

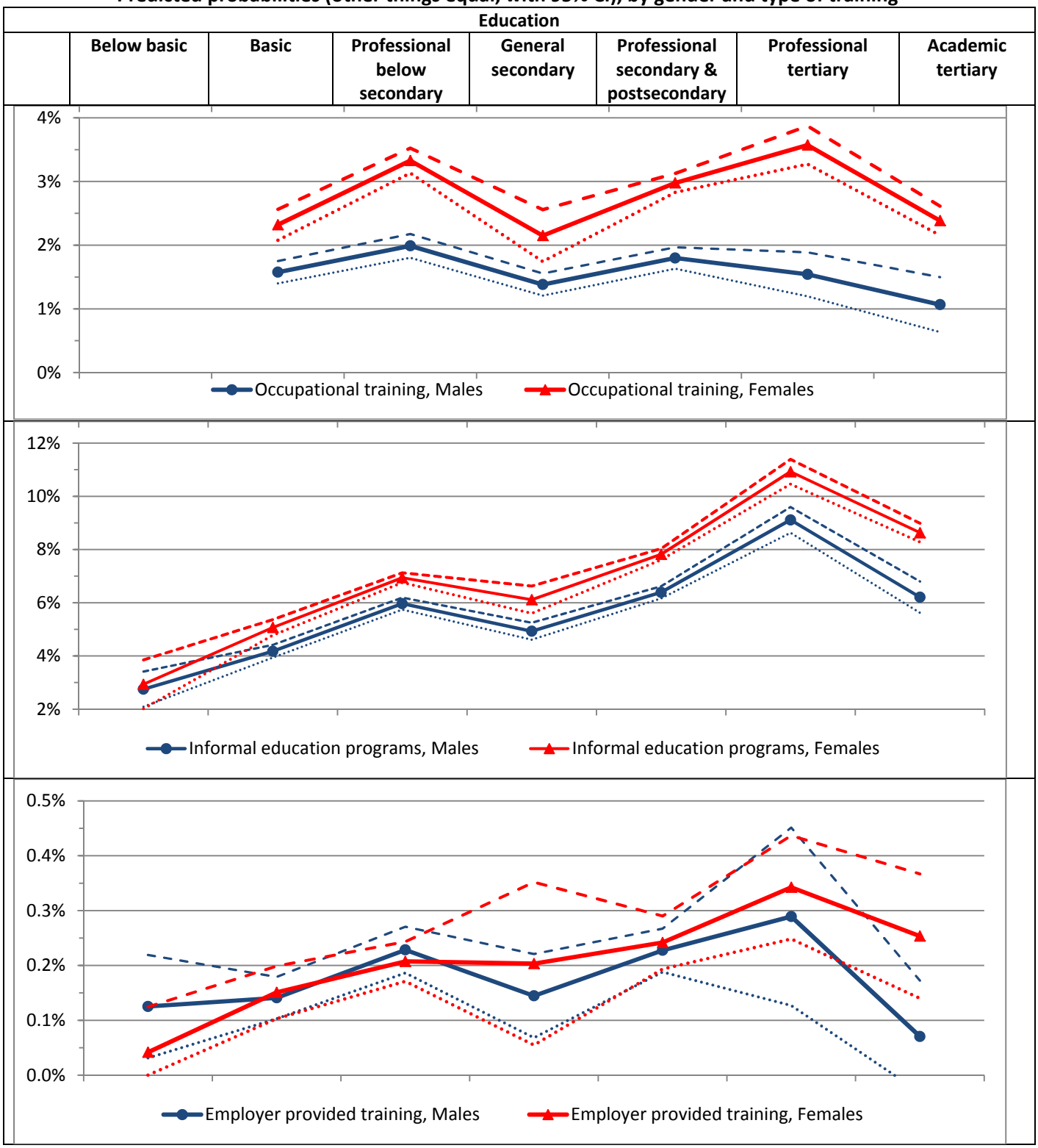
Age - participation profiles are inverse U-shaped, with maximum at 24 - 27 years for males and 29 - 36 years for females (for both genders, the propensity to undergo training peaks later for IEP than for OT and EPT).

[9] Complete analysis of selection patterns (which is outside the scope of this paper) should be based on a multinomial choice model accounting for the fact that various [types of] training programs compete with each other and the IIA assumption does not hold. By contrast, the PSM estimates require, for each program type, a "clean" control group which excludes participants of other programs, hence propensity scores are commonly derived from binomial choice models.

When other factors are accounted for, there is no statistically significant differences in propensity to take part in occupational training among males with general secondary and basic education, as well as among females with general basic or secondary and academic tertiary education (Figure 7, top panel). Males with academic tertiary education are as likely to complete occupational training as those with general secondary education, but less likely than those with basic (Figure 7, top panel).

Males and females with non-tertiary professional education are more likely to take part both in occupational training and in informal education programs than their otherwise similar counterparts with general secondary education. The effects of professional tertiary education are similar but much larger in size, with an exception of occupational training for males, in which case there is no significant difference between general secondary and professional tertiary education (Figure 7, top and middle panels; Table A.2). Participation in occupational training is negligible among males and females with education below basic (this category is not displayed in the top panel of Figure 7). For males and females alike, propensity to complete informal education programs increases along both general and professional education ladder (Figure 7, middle panel; Table A.2). Plausibly, this is because more educated individuals have lower psychic cost of classroom studies and expect larger gains from universal skills which complement their existing human capital.

Figure 9. Training participation at different education levels:
Predicted probabilities (other things equal, with 95% CI), by gender and type of training



Notes: Predictions from probit models used for 18 months-horizon PSM estimates (the latter are found in Table 5). For each program type, the sample excludes those trained in other programs. *Sources:* Authors' calculations using SEA and SSIA data.

As far as employer provided training is concerned, there is no statistically significant differences in female participation across education types and levels, while among males with professional education at any level participation is slightly higher than among their otherwise similar counterparts with general education or academic tertiary education (Figure 7, bottom panel; Table A.2).

The impact of ethnicity, citizenship and the state language skills on participation in occupational training (OT) and informal education programs (IEP) is presented in Figure 8[10]. Top panel is devoted to OT. For IEP, we provide two sets of results: for all programs together (Figure 8, middle panel) and excluding the state language training programs (Figure 8, bottom panel). Each of the three panels holds two gender-based pairs of curves: the ones to the left display the ethnicity/citizenship effects, while the ones to the right - the state language effects.

Non-Latvians (especially those without Latvian citizenship) are significantly less likely to undergo OT and IEP (females - also EPT) than otherwise similar Latvians (Table A.2; note that state language skills are included among controls). In the case of IEP, the difference between non-Latvians with and without Latvian citizenship appears only after excluding programs in the state language (non-citizens are much more likely than other groups to take part in these programs, but less likely to participate in other IEPs). More specifically, among males - ethnic Latvians (respectively, non-Latvians with and without Latvian citizenship) average predicted probability (adjusted for age, education, region, previous experience, state language skills, etc.) to take part in occupational training is 1.8% (respectively, 1.5% and 1.2%), while similar probabilities to take part in informal education programs other than state language training are 5.3%, 4.5% and 3.8%, respectively (Figure 8, top and bottom panels, left). For females, the patterns are similar although with higher probabilities.

Effects of the state language skills on training participation are much larger than those of ethnicity and citizenship. This is of course related to the fact that all training programs funded via SEA are delivered in the state language (IEP in the state language being a natural exception). Let us look at an unemployed person who has not completed school or university in Latvian language. When his/her certified state language skills vary from the highest through medium and lowest category to none, average predicted probability to take part in occupational training falls from 2.5% to 1.8% to 1.1% to 0.4% for a male and from 3.9% to 3.0% to 1.3% to 0.9% for a female (Figure 8, top panel, right). For informal education programs (IEPs) *other than state language training*, respective probabilities are 6.2%, 5.5%, 3.5% and 2.0% for males and 7.6%, 5.8%, 2.6% and 1.7% for females (Figure 8, bottom panel, right). Plausibly, larger language effects among females (revealed by wider range of probabilities) are associated with the fact that female-dominated occupations are more language-intensive.

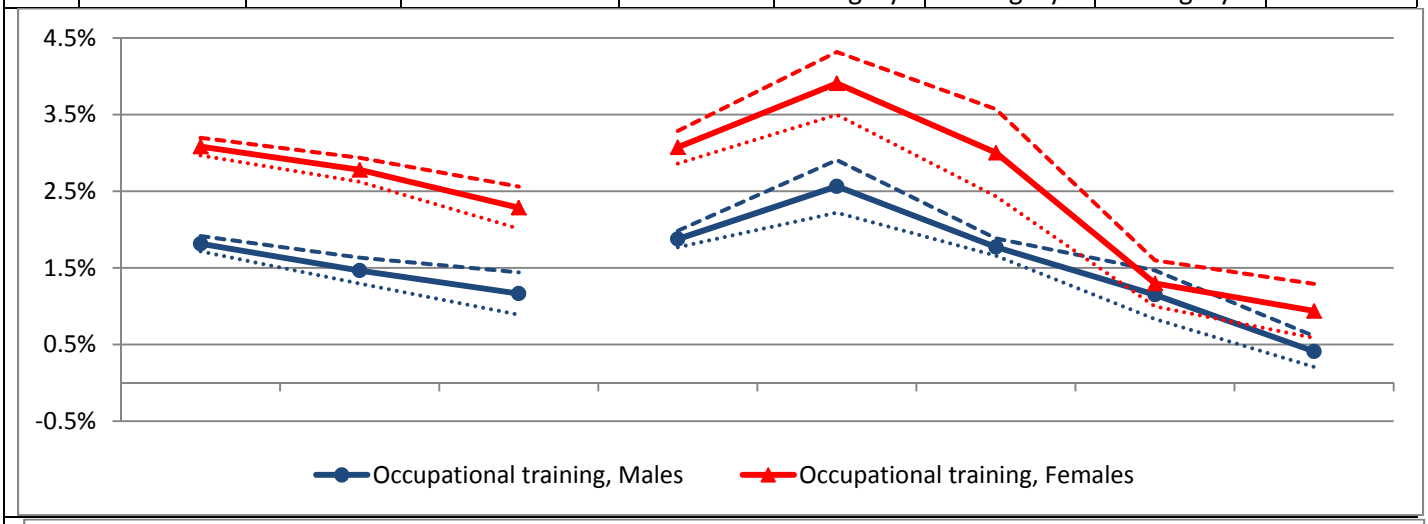
When all IEPs (including the state language training) are considered, the highest average predicted probabilities of participation are found among individuals with no certified state language skills: 7.3% for males and 14.7% for females (compared to 6.0% and 7.5% among those holding the highest category of certificate in the state language). Among females, predicted IEP participation is relatively high (9.8%) also for those with the lowest category of the state language skills.

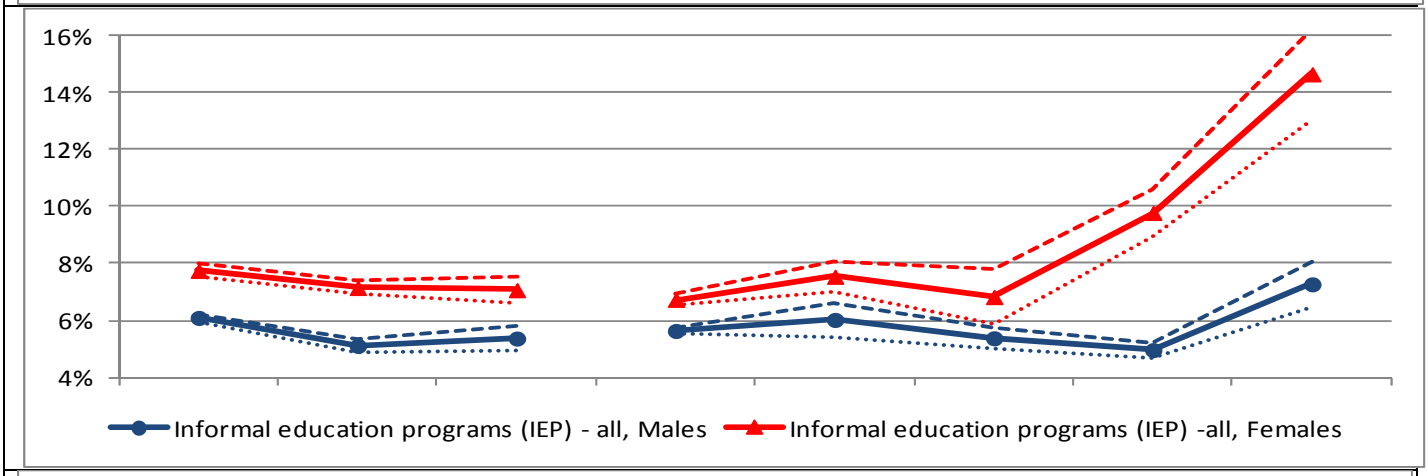
[10] Some small groups of unemployed, such as ethnic Latvians without Latvian citizenship, as well as non-Latvians - citizens of countries other than former republics of Soviet Union, are not displayed in Figure 8. Similarly to Figure 7, the samples used in the analysis of OT participation exclude participants of IEP and EPT. Likewise, middle and bottom panels of Figure 8 are based on the same samples which exclude participants of OT and EPT.

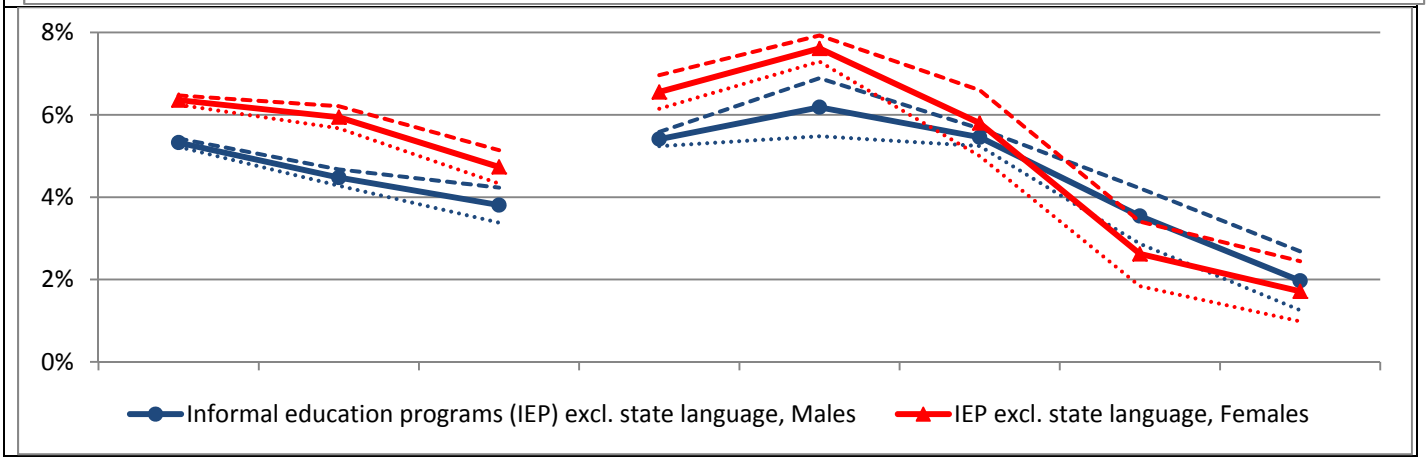
In all cases considered, predicted participation for persons with education completed in the state language is at the same level as for those with the medium category certificate.

Figure 8. Training participation depending on ethnicity, citizenship and state language skills: Predicted probabilities (other things equal, with 95% CI), by gender and type of training

Ethnicity and citizenship			State language skills				
Latvians, LV citizens	Non-Latvians, LV citizens	LV noncitizens & nationals of FSU countries	Education in Latvian	Highest (3rd) category	Medium (2nd) category	Lowest (1st) category	Not tested







Notes: Predictions from probit models used for 18 months-horizon PSM estimates (the latter are found in Table 5). For each program type, the sample excludes those trained in other programs. *Sources:* Authors' calculations using SEA and SSIA data.

Regarding the period of joblessness preceding the unemployment spell, the largest propensity to take part in occupational training and informal education programs is found among unemployed (males and females) for whom duration of this period ranges from 13 to 24 months, followed by those who waited 4 to 12 months before registering at SEA (Table A.2). Concerning participation in employer provided training, this variable does not have a significant impact for females, while for males the largest propensity is among those who stayed jobless 4 to 12 months (Table A.2).

Among unemployed with some work experience in 2005 -2010, males' propensity to take part in occupational training goes down as such experience increases, while for females this is the case only up until experience reaches 3 years, - beyond this level propensity to undergo occupational training increases with experience. In other words, other things equal, the largest predicted probability to take part in occupational training is for males and females with little experience, as well as for females with a lot of experience. By contrast, the largest propensity to take part in informal education programs is found among males with a lot of experience and females with about 3 years of experience. Propensity to take part in employer provided training is decreasing with females' experience but does not depend on males' experience. See Table A.2 for details.

Across space, the involvement of unemployed in all types of training programs is the lowest in Riga region and the highest in Latgale region (see Table A.2 for details). In other words, likelihood to obtain training is inversely related to the registered unemployment rate in the region.

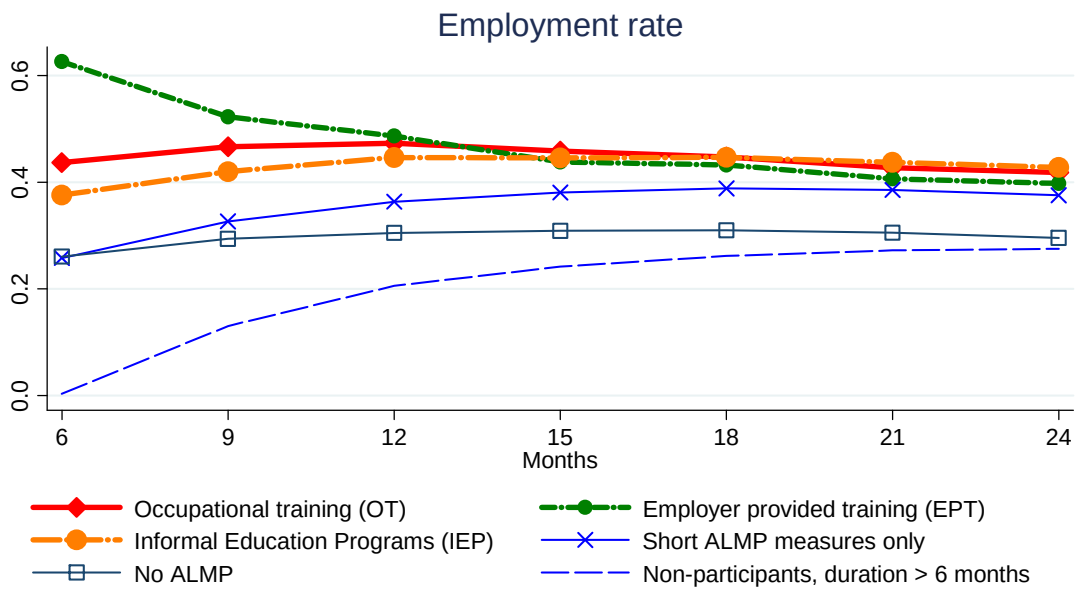
We skip detailed analysis of other determinants of training participation (in particular, previous occupation and earnings, family status, number of children, year and month of obtaining the status of registered unemployed); see Table A.2 for details.

6. Outcomes by programs: A descriptive analysis

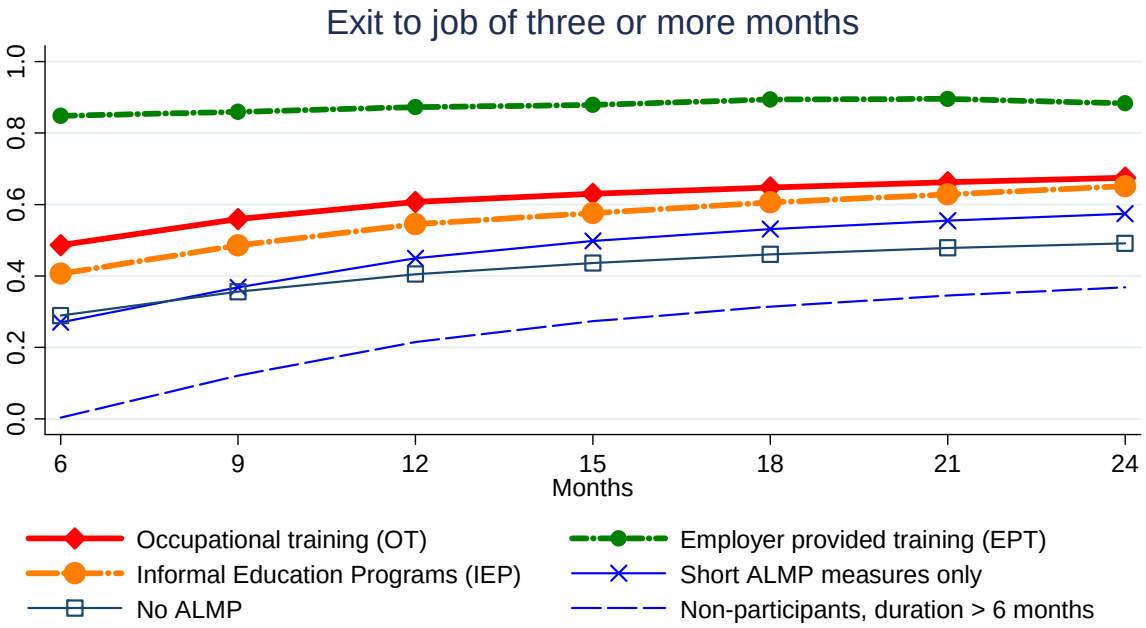
Prior to econometric analysis of program efficiency we analyze the descriptive statistics on main outcome indicators. Given that, employer provided training apart, differences between trained and not trained unemployed in terms of education, age, and experience are not dramatic (especially when not trained who underwent short ALMP measures are considered), comparison of raw outcomes makes sense and provides useful insights.

Figures 9 to 11 display employment, exit to job, work stability and earnings related outcomes at different time horizons for post-treatment durations (results for post-registration durations are presented in Figure B.2, Appendix B).

Figure 9a. Post-training outcomes, by horizon and ALMP participation : Employment and exits

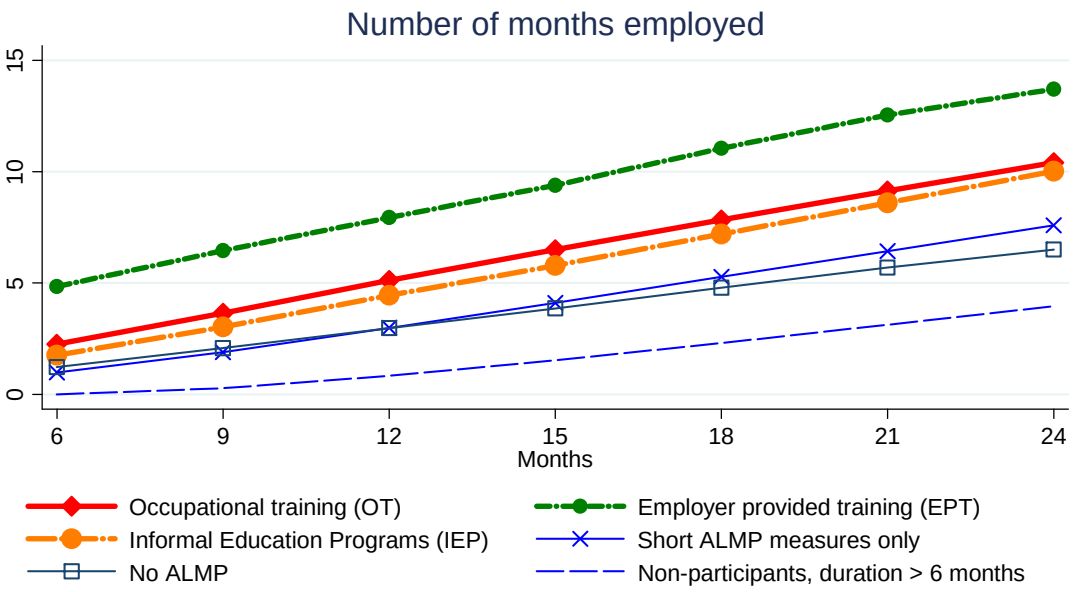


Note: Trained: By time elapsed after training completion; Others: By time elapsed after being granted status of unemployed.

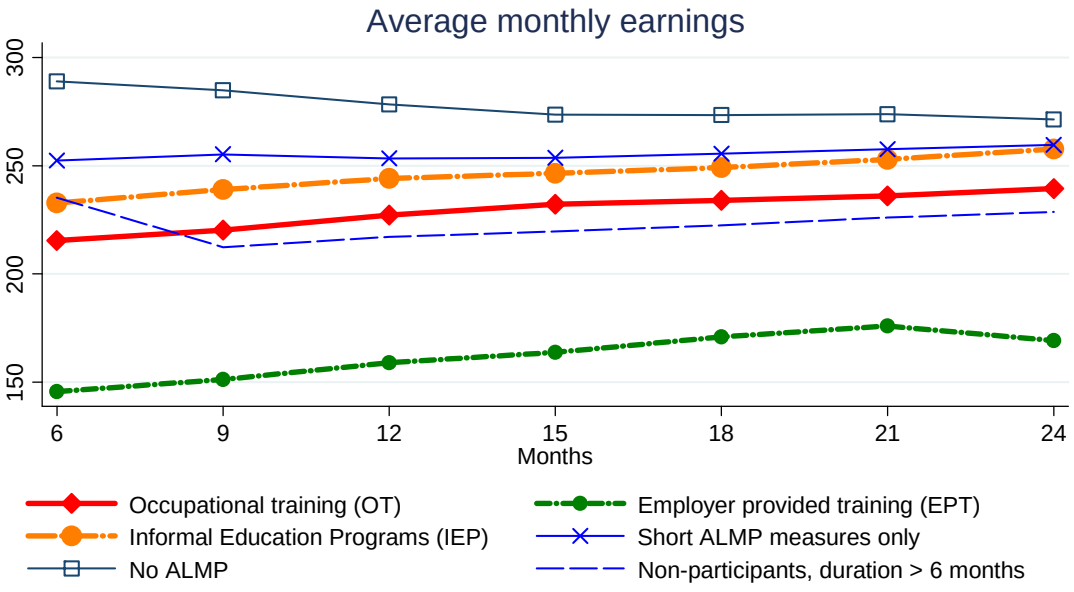


Note: By time elapsed after training completion; Others: By time elapsed after being granted status of unemployed.

Figure 9b. Post-training outcomes, by horizon and ALMP participation : Time worked and earnings



Note: Trained: By time elapsed after training completion; Others: By time elapsed after being granted status of unemployed.



Note: Trained: By time elapsed after training completion; Others: By time elapsed after being granted status of unemployed.

We start with the most important indicator - employment rate. For post-training outcomes that focus directly on performance after treatment (leaving out waiting and lock-in effects), already in 6 months after training employment rates of participants of occupational training and informal education programs are 10-15 percentage points higher than the rates observed for nonparticipants. In the longer run, this difference declines (as not trained are catching up), but remains positive. As for employer provided training (EPT), one has to take

into account that employers engaged in this measure are obliged to hire participants for at least 6 months after training. Therefore employment rates after EPT are very high directly after training (about 60%) but fall dramatically afterwards (by 10 percentage points in 6 months): at months 12 after training these are not different from employment rates of participants of other training programs and starting from month 15 are below them.

When comparing the employment rates of treated and untreated individuals at post-registration horizons (i.e. not excluding waiting and training time for those trained), positive effect of OT is found starting from month 9 and the one of IEP starting from month 18 after registration (Figure B.2, Appendix B).

Concerning exits to jobs that last at least 3 months, for post-registration outcomes one finds a waiting and lock-in effect of approximately 12 months for OT programs and of 15 months for IEP. However, when comparing post-treatment outcomes, exit rates of trained individuals are above those of non-participants already 6 months after training.

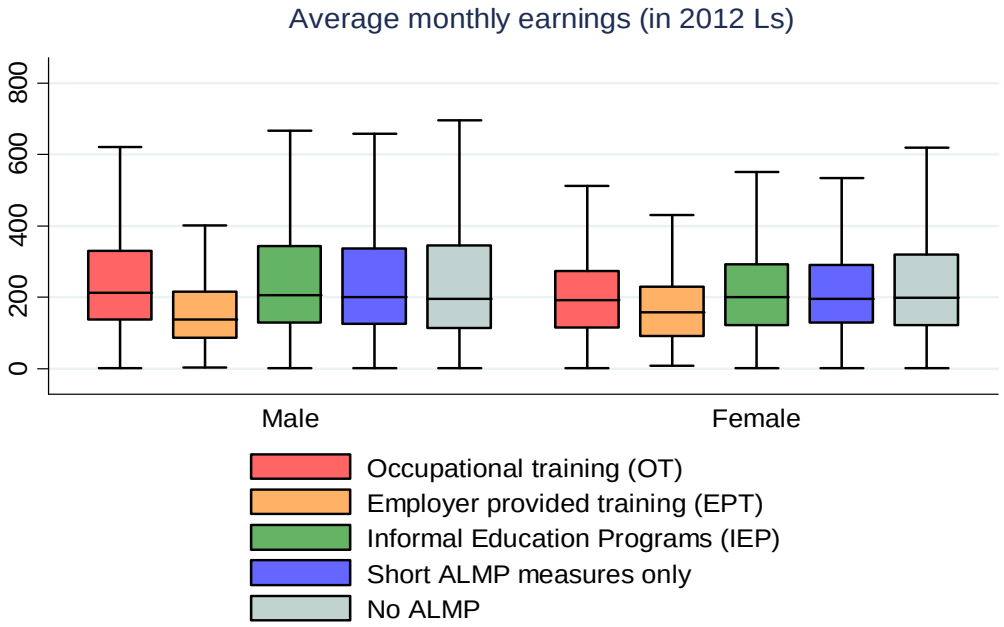
Interesting findings emerge from analysis of earnings outcomes (see Figure 9b, lower panel).[11] Despite faster return to work (after training) and higher employment rates, trained individuals earn, on average, somewhat less than their not trained counterparts. At the 6 months post-training horizon, employed participants of occupational training (respectively, informal education programs) earn on average by 16% (respectively, 9%) less than those who underwent only short ALMP measures and by 21% (respectively, 15%) less than those without any ALMP exposure. At further horizons, these gaps narrow down; at the two-years post-training horizon, the smallest of these gaps (between participants of IEP and those who underwent only short ALMP) closes, while the largest (between participants of occupational training and the "No ALMP" group) reduces to 12%.

However, already at the 9 months post-training horizon, average earnings of trained unemployed (with exception for EPT programs) exceed earnings of their natural competitors - those not trained who stayed unemployed for at least 6 months, and this gap remains fairly constant over time (about 5% for occupational training and about 12% for informal education programs). By contrast, employer provided training stands out as leading to extremely low earnings: at the 6 months (respectively, the 18 months and the 24 months) post-training horizon, graduates of these programs earn, on average 43% to 47% less (respectively, 33% to 38% less) than former unemployed who have not been trained (Figure 9b). Even in comparison with those not trained who stayed unemployed for at least 6 months the EPT trainees earn substantially less: the gap is, on average, 28% (respectively, 23%; 26%) at the 9 months (respectively, the 18 months; 24 months) horizon (Figure 9b).

When median rather than average earnings are used for comparison between groups (see (Figures 10, 11), relative earnings of trained unemployed improve: it appears that at the 6 months post-training horizon, 'the typical' (i.e., median) earnings are just 3% to 6% lower among those who underwent OT or IEP than amongst not trained.

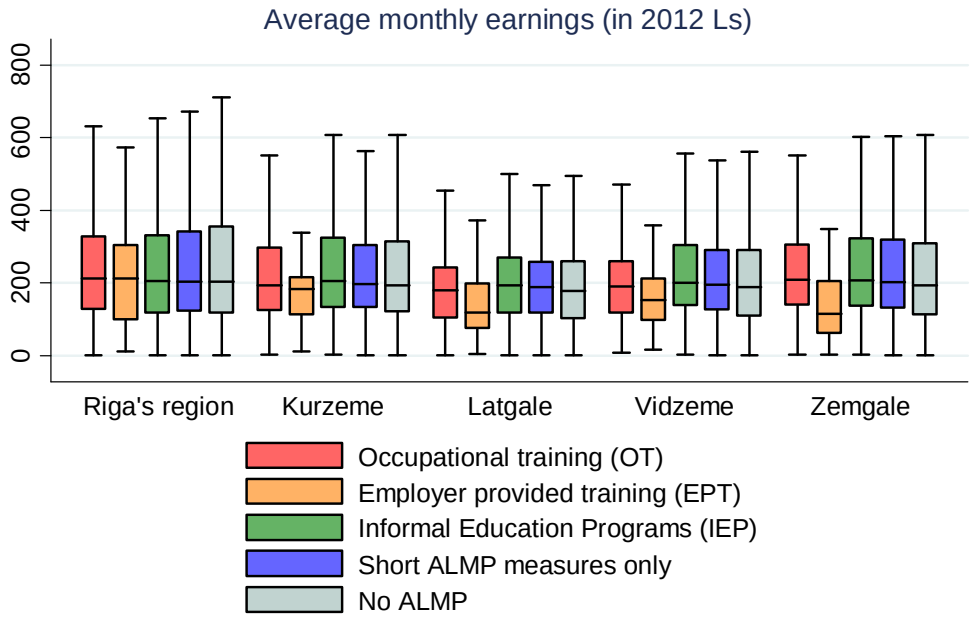
[11] As discussed above, earnings indicators developed here are conditional on being employed and are thus calculated for months worked only. In such setting, indicators are less sensitive to which one of post-treatment or post-registration durations is used to construct time horizons and provide very similar results in both cases. Furthermore, readers familiar with the Latvian wage statistics will notice that our average earnings are somewhat lower. This is because the data include part-time workers, as well as months in which only a few days have been worked.

Figure 10. Average monthly earnings in months worked during 18 post-training months, by gender and ALMP participation



Note: (Gross average earnings / number of months worked) within 18 months.
Trained: after training completion; Others: after being granted status of unemployed.

Figure 11. Average monthly earnings in months worked during 18 post-training months, by region and ALMP participation



Note: (Gross average earnings / number of months worked) within 18 months.
Trained: after training completion; Others: after being granted status of unemployed.

At the 18 months horizon the gaps disappear or become positive; this holds true for both genders (Figure 10) and in all Latvia's [NUTS-3] regions (Figure 11).

On the other hand, among both males and females, employed EPT graduates' earnings are much lower than those of all other groups at the median, as well as at the 25th and the 75th percentiles of the earnings distribution (Figure 10), especially in Latgale, Vidzeme and Zemgale regions (Figure 11).

In what follows, we use several econometric methods to analyze whether the differences observed between participant and nonparticipant groups are due to selection (composition) effects[12] or those may be interpreted as causal impact of training programs.

7. Estimation results

In this section, we concentrated on the following outcomes: (i) exit to job lasting at least three months within 18 months after training (or registration); (ii) employment 6 months and 18 months after training/registration; (iii) average monthly earnings over months worked within 18 months after training/registration. Estimated effects of training on these outcomes are presented, for each gender and each type of training (OT, EPT and IEP), in Tables 4 - 6 and Figure 12 below, as well as in Tables A.3 - A.4 (Appendix A) and Figures B.19 - B.20 (Appendix B).

Four types of estimates (the naïve ones; linear parametric estimates; probit estimates when relevant; and propensity score matching[13] estimates) are provided. The controls for parametric estimates include age and its square, education, ethnicity, citizenship, certified state language skills, region (SEA local office), family status, number of under-aged children, work experience since January 2005, year and month of registration as unemployed, duration of joblessness before registration, previous occupation (two-digit) and earnings, disability status, training and short ALMP participation. Matching is performed on the same characteristics (excl. training participation which is of course used as treatment). Standard errors for naïve and parametric estimates are clustered on SEA local office.

In Tables 4 - 6, apart from estimating the difference in outcomes between trained and not trained unemployed (rows labeled *Training* vs. *No Training*), while controlling for participation in short (non-training) ALMPs, we also compare the effects of training with those of short ALMPs (lines *Training & ShortALMP* vs. *No ALMP*, *Training, no ShortALMP* vs. *No ALMP* and *ShortALMP only* vs. *No ALMP*" to shed light on the following questions: (i) Can short ALMPs substitute any of the three training types?; (ii) Do short ALMPs strengthen the effects of training? (iii) Does training strengthen the effects of short ALMPs? Figure 12 allows for similar comparisons regarding specific training programs.

The results allow the following conclusions to be drawn.

First, the *selection bias*, i.e. difference between naïve estimate of treatment effects and the one obtained using parametric estimates or propensity score matching, is in most cases positive (or not significant) for employment outcomes after occupational training (OT) and informal education programs (IEP), but negative for employer provided training (EPT). The selection effect regarding earnings is also negative for EPT, while it is not significant

[12] I. e., potentially more (or, in the case of employer provided training, less) productive individuals in the treatment groups than in the control group.

[13] After testing several alternatives we choose to implement nearest neighbor matching with 5 neighbors and 1% of propensity score value as maximal distance between treated and the nearest control allowed.

for OT and positive for IEP. This means that compared to non-participants, individuals with potentially better employment prospects are selected into OT and IEP, and those with lower chances to find jobs (and also with lower earning ability) undergo EPT [14].

Second, *all types of professional training and informal education programs for unemployed significantly improve participants' employment rates* - both soon after training completion and in the medium term. Other things equal, the post-training employment rates at 6 and 18 months horizons are significantly higher for trained relative to untrained individuals of both genders (see Table 5 and Figure 12). In particular, occupational training increases employment rates of males and females at the 18 months horizon by 10 and 5 percentage points, respectively (hereafter, we report propensity score matching estimates; parametric estimates are either almost identical or slightly higher). The impact of employer provided training (which is heavily subsidized and hence much more costly than OT) on likelihood of employment at the 18 months horizon is somewhat smaller for males but larger for females: 9 and 12 percentage points, respectively. Employment impact of informal education programs, though statistically strongly significant, is much smaller: 5 percentage points for males and 3 percentage points for females; this, however, is consistent with the fact that IEP are shorter and cheaper than OT: while IEP include just 60 to 159 hours of studies, most of OT programs take 480 to 1280 hours, while the remaining ones take 160 to 320 hours (see Section 2.1 for details).

Other things equal, participants of OT and IEP also have significantly higher chances than nonparticipants to find, within given time, jobs that last at least 3 months: at the 18 months horizon, the difference reaches impressive 15 (respectively, 11) percentage points for males (respectively, females) after OT, while after IEP it is about 7 percentage points for both genders (Table 4). Similar effect after EPT is much larger (exceeds 40 percentage points) but it is of course driven by mandatory 6-months hiring after training.

The above matching estimates compare trained individuals with non-trained ones, controlling, among other things, for participation in short non-training ALMP measures (which is the case for 85% of trained and 63% of non-trained). As such, short ALMP participation raises likelihood of employment at the 18 months horizon by 2.9 and 3.4 percentage points for non-trained males and females, respectively (Table 5, probit estimates *ShortALMP only* vs*. No ALMP*); these effects are significantly smaller than would be (in absence of short ALMPs) those of any of the three training types (OT, EPT and IEP) for males, as well as the OT effect for females (Table 5, probit estimates *Training, no ShortALMP* vs. *No ALMP*). Regarding exit to jobs (lasting at least 3 months), similar findings emerge from Table 4, but this time it applies to all three training types for males and females alike. *This suggests that in Latvia, short non-training ALMP measures cannot substitute [existing types of] training.*

Furthermore, according to parametric estimates regarding exit to job and employment (Tables 4 and 5), the effects of training combined with short ALMP measures are always significantly larger than those of short ALMP measures without training; compared to training alone, the combination performs better either on both accounts (IEP for males and females and OT for females) or at least on one, being not significantly different on the other (OT for males and EPT for females). This suggests that, *in terms of employment outcomes, training complements and partly substitutes for short measures, and short measures to some extent complement training*.

[14] When interpreting results for EPT one should keep in mind that the institutional setting of this program involves an exit to job with the same employer for at least 6 months immediately after the end of training and thus the employment rate at month 18 is more relevant indicator then outflow to jobs.

Table A3 (in Appendix A) compares the effects of training on employment outcomes at the 6 and 18 months horizons; it also presents robustness check by using, for matching estimates, two alternative control groups: (i) C_1 (*No ALMP*) group, where individuals have not been involved in any ALMP measures; (ii) C_2 (*ShortALMP only*) group, including unemployed who have not completed OT, IEP or IEP but have been engaged in some short ALMP measure. To save space (and computation time), these estimates are presented only for pooled (males and females) samples.

The results of estimations using post-registration outcomes for both treated and control groups (Table A.4 in the Appendix A) show that positive effect of training is not observed at month 6 after registration due to waiting time and lock in effect, but becomes significant 18 months after registration.

In terms of earnings, outcomes differ by the type of training. Table 6 provides details. After occupational training, males (respectively, females), if employed, earn 6% more (respectively, 10% less) than their otherwise similar non-trained counterparts. After informal education programs, both males and females, if employed, earn less than non-trained individuals, other things equal (the difference is 4% for males and about 7% for females). Thus, in the case of IEP, gains in terms of employability are partly offset by slightly lower (or, perhaps, not fully reported) earnings. Given that training programs are primarily employment-oriented, this does not seem to be a problem.

By contrast, earnings disadvantage seems very large after training at employer's firm: those who underwent EPT (most of them, if employed, continue with the same firm), earn about 23% less than their untrained peers. This finding raises questions on the motivation employers have for participating in the EPT scheme, as well as on the way they value skills provided to trainees at their firms.

As shown by a more detailed analysis below, a substantial variation in terms of various labor market outcomes is found not only across types of training but also within each type, as well as across socio-demographic groups.

From regional perspective, training efficiency varies across SEA offices for both males and females (Figures B.19 and B.20, Appendix B). The highest impact of occupational training in terms of employment at the 18 months horizon is observed for males in Aluksne, Sigulda, Liepaja, Ventspils and Tukums regional offices and for females in Limbazhi, Aizkraukle, Dobele and Riga.

For informal education programs, men enjoy higher returns to training in Valmiera, Ogre and Kuldiga, but women in Preili, Cesis, Jurmala and Ogre. No conclusions can be drawn about performance of EPT programs at the local level because relevant samples are too small for estimating models.

Table 4. Estimation results, post-treatment outcomes: Exit to job within 18 months, by gender and program type, with control for short ALMP participation

	Occupational training (OT) Males	Employer provided training (EPT) Males	Informal education programs (IEP) Males	Occupational training (OT) Females	Employer provided training (EPT) Females	Informal education programs (IEP) Females
	Exit, within 18 months, to employment lasting 3 or more months					
Naïve estimate [a]						
Training & ShortALMP vs. *No ALMP*	**0.205*** **	**0.436*** **	**0.172*** **	**0.187*** **	**0.449*** **	**0.136*** **
	(0.0135)	(0.0265)	(0.0139)	(0.0154)	(0.0276)	(0.0248)
Training, no ShortALMP vs. *No ALMP*	**0.143*** **	**0.401*** **	**0.105*** **	**0.165*** **	**0.398*** **	**0.091*** **
	(0.0285)	(0.0394)	(0.0115)	(0.0140)	(0.0462)	(0.0148)
ShortALMP only vs. *No ALMP*	**0.079*** **	**0.079*** **	**0.079*** **	**0.062*** **	**0.062*** **	**0.062*** **
	(0.0116)	(0.0216)	(0.0116)	(0.0174)	(0.0175)	(0.0175)
Training vs. *No Training* [b]	**0.130*** **	**0.378*** **	**0.113*** **	**0.132*** **	**0.395*** **	**0.091*** **
	(0.0123)	(0.0278)	(0.0063)	(0.0111)	(0.0241)	(0.0110)
Parametric [c]: Linear probability model						
Training & ShortALMP vs. *No ALMP*	**0.189*** **	**0.453*** **	**0.116*** **	**0.145*** **	**0.427*** **	**0.093*** **
	(0.0104)	(0.0342)	(0.0055)	(0.0110)	(0.0243)	(0.0047)
Training, no ShortALMP vs. *No ALMP*	**0.149*** **	**0.475*** **	**0.074*** **	**0.139*** **	**0.451*** **	**0.068*** **
	(0.0226)	(0.0413)	(0.0096)	(0.0171)	(0.0340)	(0.0145)
ShortALMP only vs. *No ALMP*	**0.041*** **	**0.041*** **	**0.040*** **	**0.038*** **	**0.038*** **	**0.036*** **
	(0.0032)	(0.0032)	(0.0033)	(0.0049)	(0.0051)	(0.0051)
Training vs. *No Training* [b]	**0.149*** **	**0.432*** **	**0.075*** **	**0.112*** **	**0.406*** **	**0.058*** **
	(0.0099)	(0.0336)	(0.0057)	(0.0140)	(0.0218)	(0.0068)
Parametric [c]: Probit [d]						
Training & ShortALMP vs. *No ALMP*	**0.192*** **	**0.461*** **	**0.117*** **	**0.147*** **	**0.402*** **	**0.096*** **
	(0.0106)	(0.0632)	(0.0053)	(0.0108)	(0.0406)	(0.0050)
Training, no ShortALMP vs. *No ALMP*	**0.151*** **	**0.454*** **	**0.075*** **	**0.132*** **	**0.396*** **	**0.072*** **
	(0.0235)	(0.0622)	(0.0095)	(0.0165)	(0.0463)	(0.0136)
ShortALMP only vs. *No ALMP*	**0.041*** **	**0.041*** **	**0.040*** **	**0.039*** **	**0.039*** **	**0.037*** **
	(0.0036)	(0.0036)	(0.0037)	(0.0058)	(0.0059)	(0.0062)
Training vs. *No Training* [b]	**0.149*** **	**0.429*** **	**0.076*** **	**0.112*** **	**0.404*** **	**0.059*** **
	(0.0101)	(0.0542)	(0.0054)	(0.0014)	(0.0388)	(0.0066)
Nonparametric - Matching Estimator [e]						
Training vs. *No Training* [b]	**0.145*** **	**0.447*** **	**0.071*** **	**0.108*** **	**0.403*** **	**0.065*** **
	(0.0106)	(0.0252)	(0.0107)	(0.0115)	(0.0248)	(0.0108)
Median Bias before/after matching	4.0/0.6	9.4/1.8	3.9/0.3	4.2/0.5	6.8/2.1	3.6/0.4

Notes: Elapsed time: Trained – within 18 months since end of training; Others - within 18 months after being granted status of unemployed. [a] Naïve estimator gives a raw difference in outcome variable between treated/control groups. [b] The "No Training" group consists of "No ALMP" and "ShortALMP only". [c] Parametric estimators control for: age and its square, education (7 categories), ethnicity, citizenship, certified state language skills (5 categories), region (28 SEA local offices), family status, number of children aged <18, work experience since January 2005, year and month of registration as unemployed, duration of joblessness before registration, previous occupation (two-digit) and earnings, disability status, training and short ALMP participation. [d] Average marginal effect on treated (i.e., trained). [e] Common support matching (on the same characteristics as used for parametric estimates) with the 5 nearest neighbors, 2% trimmed. The distance between treated and the matched controls does not exceed 1% of propensity score.

Table 5. Estimation results, post-treatment outcomes: Employment in month 18, by gender and program type, with control for short ALMP participation

	Occupational training (OT) Males	Employer provided training (EPT) Males	Informal education programs (IEP) Males	Occupational training (OT) Females	Employer provided training (EPT) Females	Informal education programs (IEP) Females
Employment in month 18						
Naïve estimate [a]						
Training & ShortALMP vs. *No ALMP*	**0.151*****	**0.115****	**0.164*****	**0.136*****	**0.184*****	**0.120*****
	(0.0162)	(0.0559)	(0.0127)	(0.0133)	(0.0272)	(0.0186)
Training, no ShortALMP vs. *No ALMP*	**0.120*****	**0.046**	**0.115*****	**0.084*****	**0.053**	**0.089*****
	(0.0331)	(0.0665)	(0.0112)	(0.0157)	(0.0500)	(0.0114)
ShortALMP only vs. *No ALMP*	**0.083*****	**0.083*****	**0.083*****	**0.073*****	**0.073*****	**0.073*****
	(0.0092)	(0.0092)	(0.0092)	(0.0117)	(0.0117)	(0.0117)
Training vs. *No Training* [b]	**0.094*****	**0.043**	**0.106*****	**0.082*****	**0.101****	**0.070*****
	(0.0136)	(0.0424)	(0.0072)	(0.0118)	(0.0364)	(0.0080)
Parametric [c]: Linear probability model						
Training & ShortALMP vs. *No ALMP*	**0.116*****	**0.119****	**0.079*****	**0.120*****	**0.161*****	**0.052*****
	(0.0117)	(0.0475)	(0.0081)	(0.0112)	(0.0326)	(0.0061)
Training, no ShortALMP vs. *No ALMP*	**0.116*****	**0.121***	**0.059*****	**0.083*****	**0.098***	**0.039****
	(0.0292)	(0.0612)	(0.0059)	(0.0092)	(0.0539)	(0.0154)
ShortALMP only vs. *No ALMP*	**0.027*****	**0.026*****	**0.026*****	**0.031*****	**0.031*****	**0.031*****
	(0.0028)	(0.0027)	(0.0030)	(0.0034)	(0.0033)	(0.0034)
Training vs. *No Training* [b]	**0.095*****	**0.101****	**0.053*****	**0.053*****	**0.121*****	**0.024*****
	(0.0120)	(0.0384)	(0.0062)	(0.0140)	(0.0321)	(0.0071)
Parametric [c]: Probit [d]						
Training & ShortALMP vs. *No ALMP*	**0.120*****	**0.124*****	**0.082*****	**0.090*****	**0.163*****	**0.059*****
	(0.0109)	(0.0417)	(0.0077)	(0.0109)	(0.0287)	(0.0060)
Training, no ShortALMP vs. *No ALMP*	**0.125*****	**0.131****	**0.063****	**0.065*****	**0.109****	**0.047*****
	(0.0297)	(0.0590)	(0.0052)	(0.0124)	(0.0517)	(0.0136)
ShortALMP only vs. *No ALMP*	**0.029*****	**0.028*****	**0.029*****	**0.034*****	**0.034*****	**0.034*****
	(0.0037)	(0.0037)	(0.0040)	(0.0052)	(0.0051)	(0.0054)
Training vs. *No Training* [b]	**0.099*****	**0.107*****	**0.054*****	**0.056*****	**0.123*****	**0.027*****
	(0.0113)	(0.0353)	(0.0056)	(0.0131)	(0.0291)	(0.0072)
Nonparametric - Matching Estimator [e]						
Training vs. *No Training* [b]	**0.100*****	**0.086****	**0.053*****	**0.051*****	**0.121*****	**0.032*****
	(0.0110)	(0.0359)	(0.0083)	(0.0118)	(0.0354)	(0.0107)
Median Bias before/after matching	4.0/0.6	9.4/1.8	3.9/0.3	4.2/0.5	6.8/2.1	3.6/0.4

Notes: Elapsed time: Trained – within 18 months since end of training; Others - within 18 months after being granted status of unemployed. [a] Naïve estimator gives a raw difference in outcome variable between treated/control groups. [b] The "No Training" group consists of "No ALMP" and "ShortALMP only". [c] Parametric estimators control for: age and its square, education (7 categories), ethnicity, citizenship, certified state language skills (5 categories), region (28 SEA local offices), family status, number of children aged <18, work experience since January 2005, year and month of registration as unemployed, duration of joblessness before registration, previous occupation (two-digit) and earnings, disability status and ALMP participation. Shaded areas indicate cases when the outcomes after "Training without short ALMP" and "Short ALMP only" do not differ significantly. Note that the outcome after "Training & Short ALMP" always differ significantly from the

one after "Short ALMP only". [d] Average marginal effect on treated (i.e., trained). [e] Common support matching (on the same characteristics as used for parametric estimates) with the 5 nearest neighbors, 2% trimmed.

Table 6. Estimation results, post-treatment outcomes: (log) Average monthly earnings for months worked within 18 months, by gender and program type, with control for short ALMP participation

	Occupational training (OT) Males	Employer provided training (EPT) Males	Informal education programs (IEP) Males	Occupational training (OT) Females	Employer provided training (EPT) Females	Informal education programs (IEP) Females
	(log) Average monthly earnings for months worked within 18 months					
Naïve estimate [a]						
Training & ShortALMP vs. *No ALMP*	**0.064***** (0.0226)	**-0.367***** (0.1324)	**0.041** (0.0291)	**-0.103***** (0.0190)	**-0.272***** (0.0794)	**-0.036** (0.0238)
Training, no ShortALMP vs. *No ALMP*	**-0.018** (0.0506)	**-0.478***** (0.1107)	**0.018** (0.0387)	**-0.161***** (0.0328)	**-0.508***** (0.1179)	**-0.135***** (0.0271)
ShortALMP only vs. *No ALMP*	**0.023** (0.0232)	**0.023** (0.0232)	**0.023** (0.0232)	**-0.030**** (0.0104)	**-0.030***** (0.0104)	**-0.030***** (0.0103)
Training vs. *No Training* [b]	**0.029** (0.0248)	**-0.418***** (0.1041)	**0.018** (0.0129)	**-0.088***** (0.0165)	**-0.317***** (0.0792)	**-0.025** (0.0269)
Parametric [b]						
Training & ShortALMP vs. *No ALMP*	**0.105***** (0.0254)	**-0.142** (0.1397)	**-0.016** (0.0117)	**-0.078***** (0.0145)	**-0.119** (0.0742)	**-0.060***** (0.0096)
Training, no ShortALMP vs. *No ALMP*	**0.045** (0.0385)	**-0.232*** (0.1164)	**-0.049** (0.0403)	**-0.099**** (0.0394)	**-0.263**** (0.1260)	**-0.128***** (0.0168)
ShortALMP only vs. *No ALMP*	**-0.001** (0.0060)	**-0.002** (0.0060)	**-0.003** (0.0061)	**-0.015** (0.0116)	**-0.013** (0.0120)	**-0.015** (0.0109)
Training vs. *No Training* [b]	**0.094***** (0.0173)	**-0.170** (0.1066)	**-0.019*** (0.0106)	**-0.069***** (0.0116)	**-0.150**** (0.0716)	**-0.056***** (0.0151)
Nonparametric - Matching Estimator						
Training vs. *No Training* [b]	**0.055***** (0.0217)	**-0.254***** (0.0696)	**-0.040***** (0.0127)	**-0.105***** (0.0179)	**-0.259***** (0.0588)	**-0.066***** (0.0171)
Median Bias before/after matching	4.0/1.2	9.5/3.5	4.6/1.4	4.6/1.4	7.2/3.3	4.7/1.0
Obs - 18 months horizon	168324	166021	175364	15126	147498	158405
Obs - 18 months horizon /employed	94880	93304	99494	80751	78247	84994

Notes: Elapsed time: Trained – within 18 months since end of training; Others - within 18 months after being granted status of unemployed. For every individual, total earnings (measured in Lats of September 2012) from all legal jobs included. Observations with monthly earnings below 5 lats excluded (this refers to 0.3% of observations with non-zero earnings). [a] Naïve estimator gives a raw difference in outcome variable between treated/control groups. [b] The "No Training" group consists of "No ALMP" and "ShortALMP only". [c] Parametric estimators control for: age and its square, education (7 categories), ethnicity, citizenship, certified state language skills (5 categories), region (28 SEA local offices), family status, number of children aged <18, work experience since January 2005, year and month of registration as unemployed, duration of joblessness before registration, previous occupation (two-digit) and earnings, disability status, training and short ALMP participation. Shaded areas indicate cases when the outcome after "Training without short ALMP" is not significantly different from the outcome after "Short ALMP only". Note that the outcome after "Training & Short ALMP" always differ significantly from the one after "Short ALMP only". [e] Common support matching (on the same characteristics as used for parametric estimates) with the 5 nearest neighbors within 0.01 radius, 2% trimmed. The distance between treated and the matched controls does not exceed 1% of propensity score.

Effects by program type and content.

Figures 12a (for men) and 12b (for women) compare employment and earnings effects across 17 training program groups (clustered in three types), as well as short ALMPs.

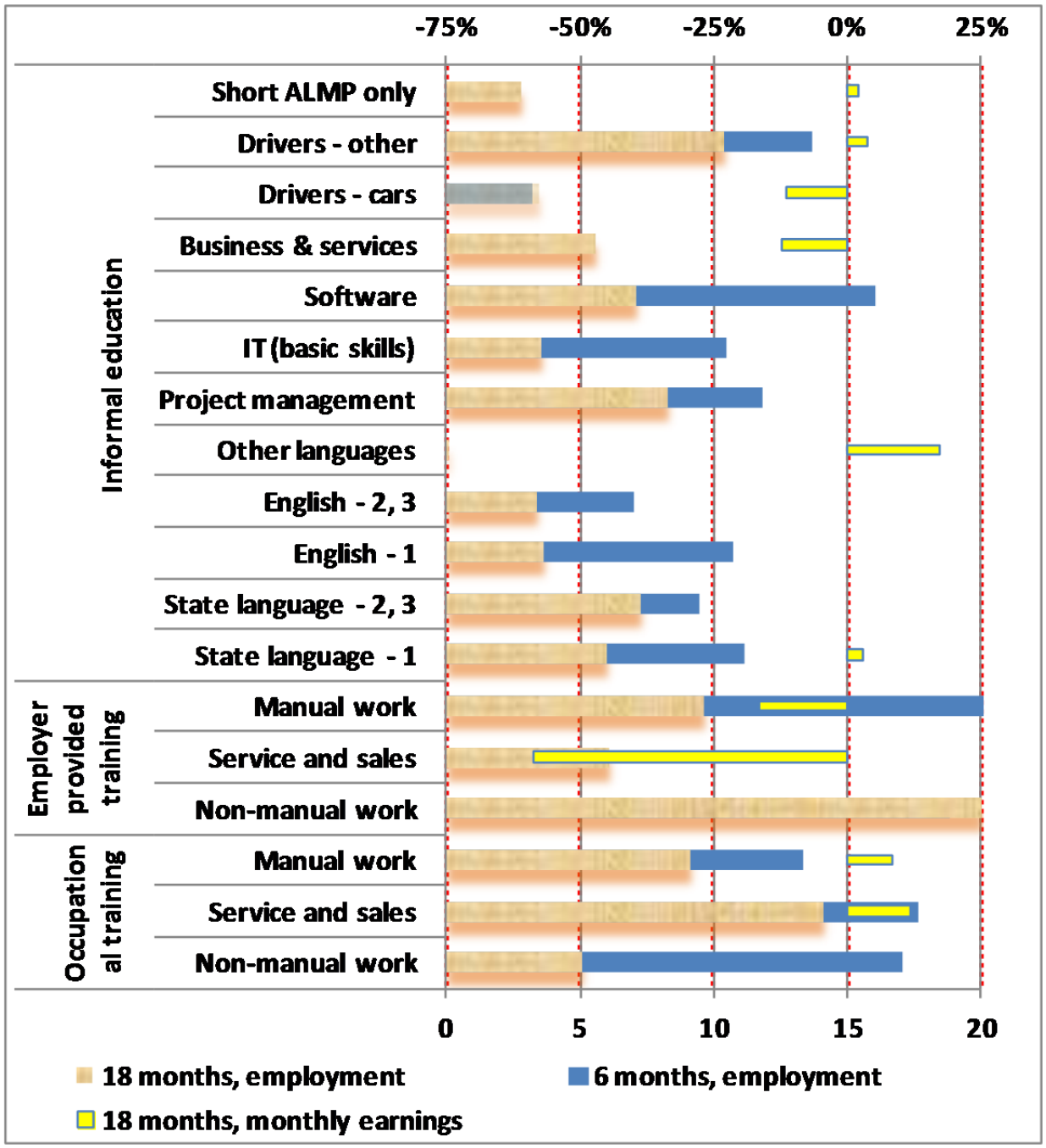
Employment effects give the percentage-point difference in the share of employed among ALMP participants and nonparticipants 6 months (blue bars) or 18 months (orange bars) after training completion (for treated) or registration (for non-treated). The effects after 6 months may be seen as the short-term effects likely associated with more successful job-finding of the trained, while the [medium-term] effects after 18 months plausibly encompass the impact of training on both job-finding rate and employment stability.

For men, the programs featuring the highest effects at both 6 and 18 months horizons (and thus facilitating both faster exits to jobs and more stable employment) include occupational training in service and sales, as well as in manual jobs, employer provided training in non-manual occupations, and informal education programs related to professional driving of transport and industrial vehicles, followed (with somewhat smaller but substantial effects) by informal education in project management and specific software products. For women, all occupational training programs, employer provided training in manual jobs, as well as informal education in basic IT skills, the state language, and intermediate or higher level English, have positive employment effects both ate short and medium term.

At the 6 months horizon, employment effects of short (non-training) ALMPs are absent for both genders; after 18 months they reach 3 percentage points, well below most types of the training programs.

Earnings indicators give the difference (in %) between ALMP participants and nonparticipants in average monthly earnings in months worked during 18 months after training completion (or registration for untreated). Earnings-enhancing programs are associated with higher (positive) difference, i.e. longer yellow bars situated to the right from the zero threshold in Figures 12a, 12b. There are no such programs for women, while for men this is the case for occupational training in manual jobs, service or sales occupations, as well as informal education in foreign languages other than English.

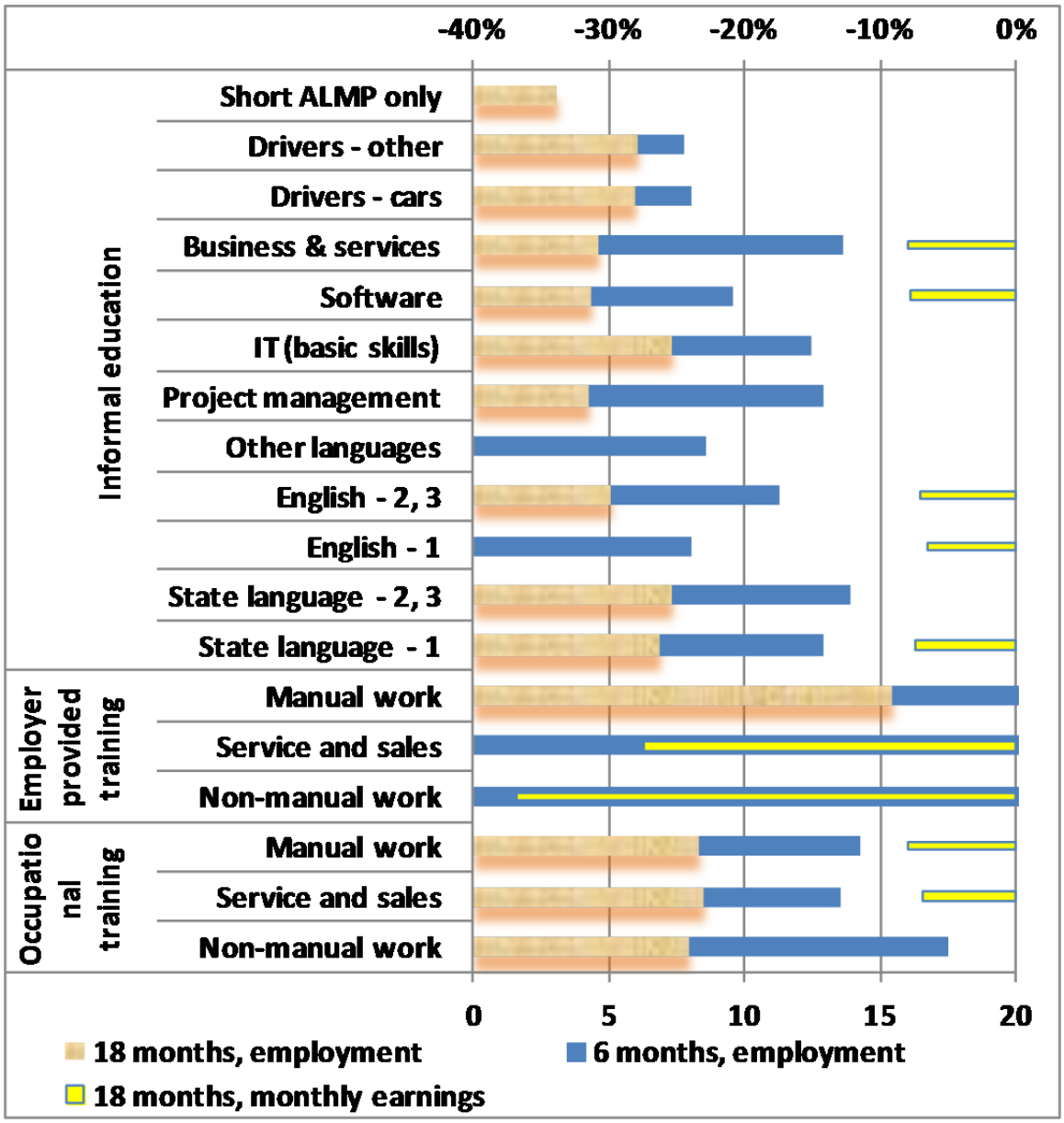
Figure 12a. Estimated ALMP effects by program group: Males



Note : Estimated ALMP effect on employment rates 6 and 18 months after training completion (% points, lower scale) ; on average earnings in months worked over 18 months (%, upper scale). Only statistically significant effects displayed. For not

trained, the 6 months and the 18 months horizons are measured since being granted status of registered unemployed.

Figure 10b. Estimated ALMP effects by program group: Females



Note : Estimated ALMP effect on employment rates 6 and 18 months after training (% points, lower scale) ; on average earnings in months worked over 18 months (%, upper scale). Only statistically significant efects displayed. For not trained, the 6 months and the 18 months horizons are measured since being granted status of regisetred unemployed.

Figure 13 summarizes the employment and earnings effects of different program groups and suggests that there is a tradeoff between employment and earning outcomes.

Figure 13. Estimated ALMP effects for program groups, summary

efficiency		Employment rates 6 and 18 months after training completion		
		+ (low at 6 months and at 18 months)	++ (high at 6 months, low at 18 months)	+++ (high at 6 months and at 18 months)
Earnings 18 months after training	–	(men) EPT Service and Sales IEP Car driving IEP Business and Services (women) IEP English-1 and Software	 (women) EPT Service and Sales EPT Non-manual jobs IEP Business and Services	(men) EPT Manual jobs (women) OT Service and Sales OT Manual jobs IEP State language-1
	0	(men) IEP English IEP IT	(men) OT non-manual work IEP Software (women) IEP Project management	(men) EPT Non-manual jobs (women) OT Non-manual jobs EPT Manual jobs IEP State language -2, 3; IT
	+			(men) OT Service and Sales OT Manual work IEP Driver's license for passenger and freight transport or industrial vehicles

Note:"High" and "low" are gender-specific; effects are generally larger for men. IEP in State language and Project Management for men, as well as Driving IEP for women, are not shown; these programs can be described as having zero earnings effect and medium employment effect at 18 months.
Source: Elaborattion on results presented in Figures 12a, 12b.

The employment effects are positive for most content-specific program groups. However, for most of the employer provided training programs (service and sales sector for both genders; manual jobs for men, and non-manual jobs for women), the participants who keep their jobs have much lower wages than otherwise similar participants of other programs or non-participants; for females, these programs also do not show a long-term effect on employment. Hence, there is no case for general expansion of subsidized employer provided training in

Latvia. Existing evidence justifies this type of training only in manual jobs for women and non-manual jobs for men, with carefully selected employers and under strict control.

To conclude, the best performing programs for *men* include:

- professional training in manual, as well as service and a sales jobs;
- informal education programs for professional drivers of transport and industrial vehicles;
- informal education programs in project management and specific software products;
- employer provided training in non-manual jobs.
  For *women*, the best performing programs include:
- employer provided training in manual jobs;
- professional training in non-manual jobs;
- informal education programs in IT (basic skills) and state language (categories 2 & 3);
- professional training in manual, as well as service and a sales jobs[15].

Note, however, that there are programs not listed above which have smaller but significant employment effects and are therefore useful (e.g. informal education programs in state language programs for men, in driving for women, in business and services for both genders).

Results for vulnerable youth and seniors

Figure 14 below shows the estimated effects of various training programs on employment (18 months after training completion) of uneducated youth (15-24 years of age with basic education or less), as well as of senior(aged 50+) unemployed with officially recognized disability. The effects have been estimated separately for men and women, so in total four groups of vulnerable unemployed are considered.

[Classroom] *training in occupations related to services and sales* appears to be beneficial to all four groups. *Occupational training in manual jobs* improves employment prospects of young men with low education level, as well as of senior unemployed with disabilities of both genders. By contrast, occupational training in non-manual professions does not seem to have any significant employment effect for the groups in question.

Positive effect of *training at employer's firm* is detected only *for young low-educated men* and *only in manual occupations or occupations related to sales and services*.

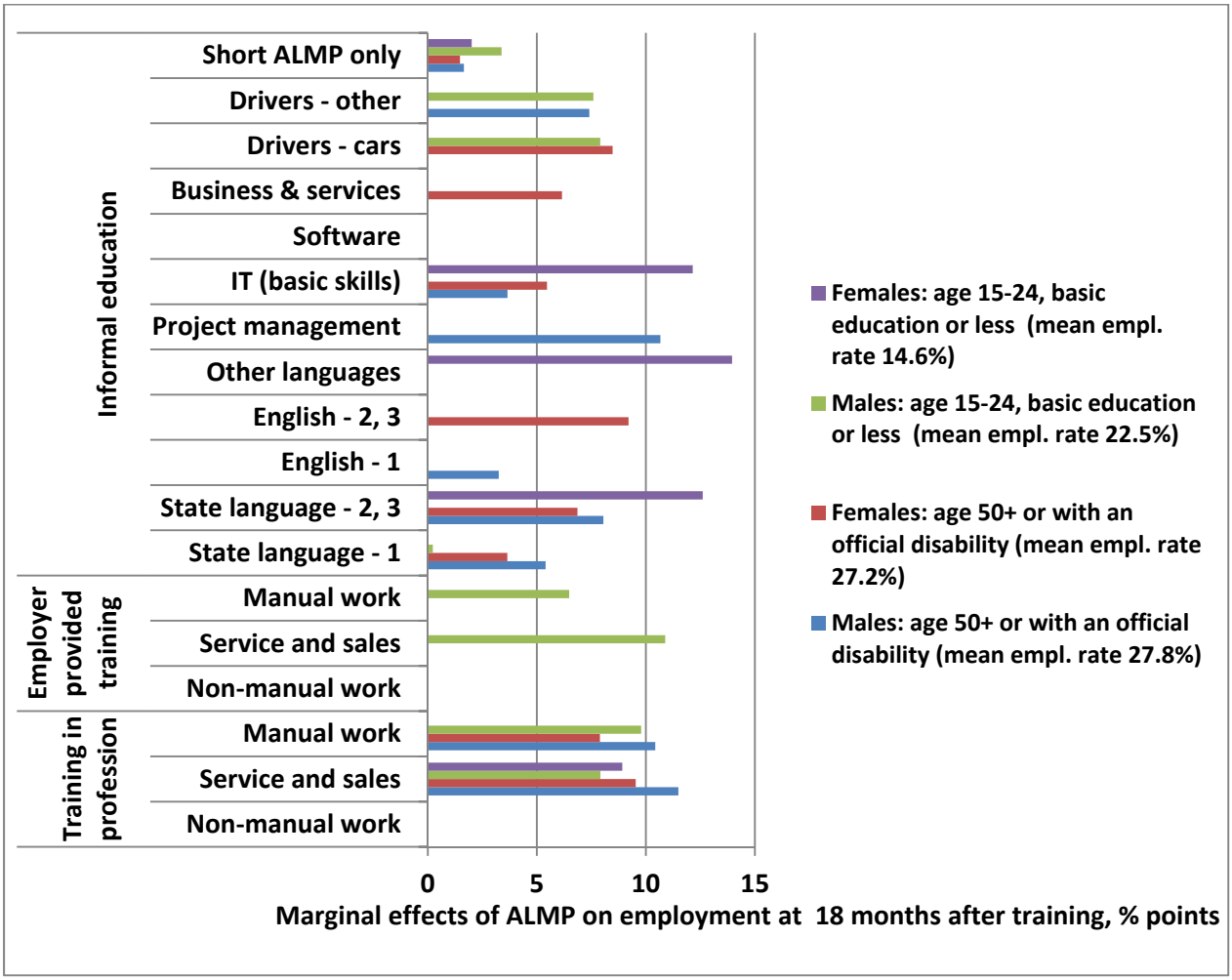
Concerning informal education programs (or training in "soft skills"), *young women with low education have better employment opportunities after acquiring basic IT skills or completing courses in state language (levels 2 and 3) or foreign languages other than English*. Moreover, the effects of IT and state language programs for this particular group are about twice as strong as the ones obtained for women in general, while training in foreign languages other than English has no significant effect on women in general.

For *young men with basic education or less*, only one group of informal education programs has a positive effect on employment in 18 months: *programs leading to driving licenses* (for cars, passenger and freight transport and industrial vehicles).

[15] Strong employment effects of professional training in manual, as well as service and a sales jobs for women (14 and 8 percentage points after 6 and 18 months, respectively) are much more important than relatively small (7 to 8 %) negative earnings effects.

For unemployed of both genders aged 50+ and suffering from disability, acquiring IT or state language skills through informal education programs significantly improve employment prospects. In addition, *women of this category benefit also from IEP in English (levels 2 and 3) and from* receiving *car driving license* (probably because this increases their mobility and enlarges the pool of accessible jobs). Finally, obtaining license for driving passenger or freight transport or some industrial vehicle appears to be helpful in finding (and keeping) jobs to senior men with disabilities.

Figure 14. Estimated ALMP effects for vulnerable youth and seniors



Note : Estimated ALMP effect on employment rates 18 months after completing training (or short ALMP measure). Only statistically significant efects displayed. For those who have not participated in ALMP, the 18 months horizon is measured since being granted status of registered unemployed.

Results from duration models

Duration models (e.g. Cox proportional hazard model) allow comparing the instantaneous probability of exit to jobs by participant and non-participant of ALMP, while controlling for time spent in unemployment, individual socio–demographic characteristics and labor market history. Here we briefly describe the main findings; full estimation results are available on request. Given that for employment provided training exits are driven by mandatory 6-months employment period after training, only results for occupational training (OT) and informal education programs (IEP) are discussed. By and large, these results are in line with the exit and employment effects reported in Tables 4 and 5 and Figures 12a, 12b (and discussed above).

Conditional on unemployment duration, for trained men the probability of exit to job is higher at any point of time than for their non-trained counterparts (we use here post-training durations). Other things equal, participants of OT (respectively, IEP) have 45% (respectively, 21%) higher hazard rates compared to those not involved in any ALMP. For women, the same ranking stands, but policy effects of classroom training are smaller (33% for OT and 12% for IEP).

These differences are even higher when trained individuals are compared with non-participants who after 6 months since registration (about the time when training starts for most participants) are still unemployed (in other words, when the "early birds" among non-participants are excluded).

On the other hand, when "duration" is measured as total unemployment duration since registration excluding duration of training, the effects of training remain positive but decrease by half for OT, and become statistically insignificant (men) or even negative (women) for IEP.

When training programs of different content are compared for men, training in low-skilled non-manual occupations (ISCO 4 and 5) appears to be the most effective among OT programs - it increases the hazard rate by 69%; the effect of OT in manual jobs is 36%, while training in highly-skilled non-manual occupations (ISCO 1, 2, 3) does not seem to significantly foster exit from unemployment to jobs (yet it seems to help keep jobs, as follows from the results presented in Figure 12a).

The best performing (in terms of job-finding hazard) informal education programs for men are (in order of decreasing impact on hazard) courses in Business and Services (+58%), followed by Project Management (36%), training leading to Driver's license for passenger and freight transport or industrial vehicles (34%), and courses in specific Software products (34%). Courses in State Language (all levels) and English (level 1) have significant but much smaller effects.

For women, the best results in terms or return to work are found for occupational training in high-skilled non-manual professions (ISCO 1, 2 and 3) or in manual professions (ISCO 6 to 9): other things equal, the job-finding hazard goes up by 45% and 39%, respectively. Training in Services and Sales occupations is slightly behind, boosting the job-finding hazard by 31%. Among informal education programs, the highest impact on the job-finding hazard (about 20%) is found for courses in Business and Services, Project Management, basic IT skills, Car Driving and State Language (levels 2 and 3).

Other things equal, short (non-training) ALMPs increase the hazard of exit to job a by 8% among men and by 4% among women (compared to non-participants in ALMP).

As to the role of socio-demographic characteristics, the features that increase instantaneous probability of exit to job (and thus shorten unemployment duration) for both genders are higher or professional secondary education, work experience, high past earnings, Latvian ethnicity, Latvian citizenship and education obtained in Latvian language. Absence of work experience is much more penalizing for women. The [positive] effect of past earnings is also much more important for women. Other things equal, the job-finding hazard is highest for married individuals but decreases (especially for women) with the number of children younger than 18 years.

8. Conclusion

This paper evaluates the employment effects of unemployed training provided by Latvian State Employment Agency (SEA) in 2008-2011.

Using two novel data sources (Latvian SEA administrative records and monthly records of State Social Insurance Agency) allow for observing registered unemployment history and official employment and earnings history for all individuals both before and after the training. Moreover, we use very detailed information on type, content and duration of training.

We focus on three main types of training available to Latvian unemployed: (i) Occupational Training (classroom training in profession; 43 narrow programs distinguished by content); (ii) Informal Education Programs (classroom training aimed at enhancing universal skills and competences, such as language skills, IT skills, project management, driving, etc.; 18 narrow programs distinguished by content); (iii) Employer Provided Training (training in profession at employer's firm; 13 narrow programs are distinguished by content).

Both parametric regressions and non-parametric method of statistical matching on propensity score are used to estimate the treatment effect of training on a set of employment-related outcomes: transition to employment, employment at different time horizons, total time employed, average monthly earnings. We also run duration models when the outcome variable is duration of unemployment until job is found.

Distinguishing by program type and contents allows comparing relative efficiency of different programs, while using sub-population analysis (by gender, by region) allows assessing treatment effect heterogeneity across these groups.

Our findings suggest that professional training and informal education programs for unemployed significantly improve participants' employment rates—both soon after training completion and in the medium term, although substantial variation in terms of efficiency is found both between types of programs and within each type.

However, the effect on earnings is either non-significant or slightly negative for classroom training and highly negative for employer provided training programs. In fact, the EPT participants who keep their jobs have much lower wages than otherwise similar participants of other programs or non-participants; for females, these programs also do not show a long-term effect on employment. We conclude that there is no case for general expansion of subsidized employer provided training in Latvia.

We have identified the best-performing programs for men and for women in general, as well as for vulnerable groups (low-educated youth and unemployed aged 50+ with disabilities).

Participation in occupational training and informal education programs other than state language courses is very low among unemployed with the lowest category or without any category of certified state language skills. This suggest that state language courses, especially at levels 1 and 2, should be complemented with other types of training.

We also assess the effect of short (non-training) measures to improve competitiveness of the unemployed and find that such programs have a small but statistically significant positive effect; they to some extent complement but (especially in the medium and longer term) cannot substitute training. On the other hand, in terms of employment outcomes, training complements and partly substitutes short measures.

Our results show that training programs may be effective in fighting unemployment and are in line with recent findings in this area. Thus Lechner et al. (2011), Biewen et al. (2013), Osikominu (2013) also find that training has negative short-run (lock-in) effects on employment, but in the longer run effects on employment become positive and after the end of training participants exit to employment at a much faster rate than without training. These studies also point on positive effect on earnings, which we only observe after occupation training for males.

When comparing the efficiency of training for men and women, our results point on higher returns to training for men, which contrasts Lechner et al. (2007).

When comparing different types of training, our conclusions slightly differs from findings of Biewen et al. (2013): they find similar employment effects of traditional classroom training and short measures (monitoring, job search assistance), while we observe that occupational training or informal training participants have better employment prospects compared to unemployed who have only been involved in short ALMPs.

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APPENDIX A

Tables

Table A1. Distribution of individual characteristics for trained and not trained unemployed

	Trained			Not trained		All
	Occupational training (OT)	Employer provided training (EPT)	Informal Education Programs (IEP)	Short ALMP measures only	No ALMP	
Female	61.4	51.6	56.9	49.4	45.7	48.9
Age						
Age 15-24	27.9	29.2	17.6	19.5	26.7	22.0
Age 25-34	25.8	25.6	25.2	24.8	25.9	25.2
Age 35-44	22.2	20.1	23.5	21.2	18.7	20.5
Age 45-54	18.8	18.5	24.2	21.6	17.5	20.4
Age 55+	5.1	6.6	9.5	12.9	11.2	11.9
Education						
Below basic	0.0	1.2	0.9	2.0	3.2	2.3
Basic	16.4	18.0	11.6	17.3	22.7	18.7
Secondary	32.7	29.7	26.6	27.5	27.6	27.6
Professional below secondary	4.9	5.4	5.0	6.7	5.7	6.2
Professional secondary or post-secondary	29.3	31.8	32.5	30.1	24.1	28.3
Professional higher	9.1	7.7	12.8	7.7	7.1	7.9
Higher	7.4	5.8	10.3	8.0	7.9	8.1
NA	0.2	0.3	0.3	0.7	1.5	0.9
Citizenship and ethnicity						
Latvians, LV citizens	68.1	68.8	57.3	57.1	52.3	55.8
Non-Latvians, LV citizens	23.0	21.0	25.1	24.8	25.7	25.1
LV noncitizens & FSU countries' nationals	8.8	10.0	17.3	17.8	21.6	18.8
Non-FSU countries nationals	0.1	0.2	0.3	0.2	0.4	0.3
Family status						
Non-married	56.4	55.8	50.0	53.2	60.1	55.4
Married	39.4	40.9	45.6	42.2	35.5	40.1
Divorced	3.6	2.6	3.6	3.6	3.5	3.6
Widower	0.5	0.7	0.8	1.0	0.9	1.0
Number of children aged <18						
None	59.7	64.9	60.9	64.7	67.0	65.1
One	22.6	18.6	22.2	20.2	19.1	20.0
Two	13.3	11.9	13.3	11.4	10.5	11.2
Three and more	4.4	4.6	3.6	3.7	3.5	3.7
Knowledge of state language						
Not tested or missing	1.7	6.8	5.5	9.4	14.6	10.7
Education in Latvian	69.7	70.3	58.3	59.7	55.3	58.3
Highest grade	8.1	5.3	8.0	5.6	5.2	5.6
Medium grade	15.8	10.6	17.3	15.6	15.5	15.7
Lowest grade	4.7	7.0	10.8	9.8	9.4	9.6
Previous activity						
Worked or self-employed	76.1	65.0	81.2	79.4	68.7	75.8
New graduate or student	5.0	4.7	2.6	2.5	6.3	3.9
Maternity leave	5.0	3.5	3.6	3.5	3.2	3.4
Other or unknown	14.0	26.7	12.6	14.6	21.8	16.9

Table A1. Distribution of individual characteristics for trained and not trained unemployed (cont.)

	Trained			Not trained		All
	Occupational training (OT)	Employer provided training (EPT)	Informal Education Programs (IEP)	Short ALMP measures only	No ALMP	
Monthly earnings at the last job [a], LVL						
Mean	295	191	347	317	298	318
Median	214	156	236	217	192	215
Monthly earnings over the last year [b], LVL						
Mean	215	118	272	253	220	242
Median	125	0	175	165	40	141
Work experience since 2005 (% distribution)						
Without work experience	9.5	15.8	7.7	8.8	13.6	10.3
Less than 1 year	13.6	17.1	8.6	9.7	14.9	11.4
1-3 years	26.5	28.5	22.3	24.7	28.9	26.0
More than 3 years	50.4	38.6	61.5	56.9	42.7	52.2
Last occupation (% distribution)						
Managers	3.2	2.8	5.9	4.1	4.6	4.4
Professionals	6.7	4.1	9.4	6.6	6.2	6.7
Associated professionals and technicians	10.6	7.6	12.2	9.1	8.9	9.3
Clerks	8.9	5.2	7.7	6.0	5.1	5.9
Service and sales workers	17.9	12.7	15.6	14.7	12.1	14.0
Skilled agricultural workers	0.8	1.5	0.7	1.4	0.8	1.1
Craft and related trades workers	12.9	9.8	12.7	15.3	12.6	14.2
Plant/machine operators & assemblers	5.7	6.9	8.7	10.1	7.4	9.0
Elementary occupations	10.6	16.5	9.5	13.3	12.0	12.5
Military	0.1	0.1	0.1	0.1	0.1	0.1
None	20.3	31.7	16.4	18.1	28.6	21.6
NA	2.4	1.2	1.2	1.2	1.6	1.4
UB recipients in the given spell (%)	65.2	43.8	73.8	68.3	45.1	60.7
Region (% distribution)						
Riga's region	38.9	28.4	43.1	44.5	62.0	50.2
Kurzeme	16.1	12.3	14.0	13.9	11.7	13.2
Latgale	18.6	34.9	20.0	16.9	8.0	14.2
Vidzeme	10.6	13.2	10.0	10.2	7.9	9.4
Zemgale	15.8	11.2	12.9	14.5	10.4	13.0
Registration year (% distribution)						
2008	22.9	8.7	18.0	18.2	36.1	24.2
2009	52.2	35.6	44.2	39.1	31.8	37.2
2010	19.2	41.3	32.6	22.6	19.4	22.2
2011	5.6	14.4	5.3	20.1	12.7	16.4
Participation in short ALMP (%)	83.0	70.1	85.5	100.0	0.0	65.0
Observations	7870	909	26678	229972	134454	399883

Sample: First unemployment spell of individuals registered with SEA as unemployed between 1 January 2008 and 31 December 2011. Notes: [a] Monthly earnings at the last job are defined as average monthly earnings (for months worked) in

12 months preceding the end of previous employment. [b] Monthly earnings over the last year are defined as average monthly earnings in 12 months preceding the registration.

Table A2. Determinants of probability to undergo a training program - marginal effects

	OT	EPT	IEP	OT	EPT	IEP	OT	EPT	IEP
	Both genders			Males			Females		
Female	0.008***	0.001***	0.017***						
	(0.0006)	(0.0002)	(0.0009)						
Age									
Ref : 35-44 years old									
15-24 years old	0.003***	0.001**	-0.005***	0.002**	0.001	0.002	0.004***	0.001**	-0.011***
	(0.0010)	(0.0003)	(0.0015)	(0.0011)	(0.0005)	(0.0020)	(0.0016)	(0.0005)	(0.0024)
25-34 years old	-0.000	0.001**	-0.004***	-0.002**	0.001	-0.001	0.001	0.001	-0.008***
	(0.0008)	(0.0003)	(0.0013)	(0.0009)	(0.0004)	(0.0016)	(0.0012)	(0.0004)	(0.0019)
44-55 years old	-0.003***	-0.001**	0.001	-0.002**	-0.001**	-0.006***	-0.003**	-0.000	0.011***
	(0.0008)	(0.0003)	(0.0014)	(0.0010)	(0.0003)	(0.0017)	(0.0013)	(0.0004)	(0.0022)
55 + years old	-0.013***	-0.001***	-0.023***	-0.009***	-0.001***	-0.022***	-0.018***	-0.001***	-0.022***
	(0.0008)	(0.0003)	(0.0014)	(0.0010)	(0.0004)	(0.0019)	(0.0012)	(0.0004)	(0.0023)
Education									
Ref : Secondary general									
Below basic	-0.024***	-0.002***	-0.028***	-0.018***	-0.001***	-0.027***	0.000	-0.003***	-0.032***
	(0.0005)	(0.0003)	(0.0024)	(0.0007)	(0.0005)	(0.0027)	(0.0000)	(0.0003)	(0.0043)
Basic	-0.006***	-0.001***	-0.017***	-0.003***	-0.001*	-0.017***	-0.009***	-0.001***	-0.018***
	(0.0007)	(0.0002)	(0.0012)	(0.0009)	(0.0003)	(0.0015)	(0.0012)	(0.0003)	(0.0019)
Professional below secondary	-0.006***	-0.001**	-0.009***	-0.003***	-0.001**	-0.011***	-0.010***	-0.000	-0.007**
	(0.0010)	(0.0003)	(0.0017)	(0.0012)	(0.0004)	(0.0020)	(0.0019)	(0.0006)	(0.0030)
Professional secondary or post-secondary	-0.002***	0.000	0.006***	-0.001	0.000	0.004***	-0.004***	0.001	0.007***
	(0.0007)	(0.0002)	(0.0011)	(0.0008)	(0.0003)	(0.0014)	(0.0011)	(0.0004)	(0.0017)
Professional higher	0.002	0.001**	0.030***	-0.002*	0.000	0.028***	0.003*	0.002**	0.033***
	(0.0012)	(0.0005)	(0.0019)	(0.0015)	(0.0007)	(0.0029)	(0.0017)	(0.0007)	(0.0027)
Higher	-0.007***	-0.000	0.009***	-0.007***	-0.001	0.005*	-0.008***	-0.000	0.015***
	(0.0010)	(0.0004)	(0.0018)	(0.0014)	(0.0006)	(0.0028)	(0.0014)	(0.0005)	(0.0025)
Not known	-0.018***	-0.002***	-0.029***	-0.014***	-0.001	-0.032***	-0.023***	0.000	-0.024***
	(0.0017)	(0.0006)	(0.0039)	(0.0017)	(0.0011)	(0.0042)	(0.0031)	(0.0000)	(0.0070)
Citizenship									
Ref : Latvians, LV citizens									
Non-Latvians, LV citizens	-0.004***	-0.001***	-0.007***	-0.004***	-0.000	-0.009***	-0.004***	-0.001***	-0.005**
	(0.0008)	(0.0003)	(0.0013)	(0.0010)	(0.0004)	(0.0018)	(0.0012)	(0.0004)	(0.0020)
LV noncitizens & FSU countries' nationals	-0.008***	-0.000	-0.000	-0.007***	0.000	-0.004*	-0.009***	-0.001**	0.003
	(0.0009)	(0.0004)	(0.0017)	(0.0010)	(0.0005)	(0.0022)	(0.0015)	(0.0005)	(0.0026)
Non-FSU countries nationals	-0.009*	0.000	0.016*	-0.005	0.000	0.013	-0.014*	0.000	0.022
	(0.0048)	(0.0020)	(0.0087)	(0.0058)	(0.0026)	(0.0101)	(0.0075)	(0.0035)	(0.0152)
Family status									
Ref : Non-Married									
Married	0.001	0.001***	0.001	-0.001*	0.001***	0.001	0.003***	0.001**	0.003**
	(0.0006)	(0.0002)	(0.0009)	(0.0007)	(0.0003)	(0.0013)	(0.0009)	(0.0003)	(0.0014)
Divorced	0.001	-0.000	-0.004*	0.002	-0.001	-0.005*	-0.000	-0.000	-0.001

	(0.0013)	(0.0005)	(0.0022)	(0.0016)	(0.0008)	(0.0030)	(0.0021)	(0.0007)	(0.0032)
Widower	-0.009***	-0.000	-0.013***	-0.016**	-0.001	-0.013	-0.008*	-0.000	-0.016***
	(0.0031)	(0.0010)	(0.0043)	(0.0076)	(0.0023)	(0.0092)	(0.0042)	(0.0012)	(0.0054)

Table A2. Determinants of probability to undergo a training program - marginal effects (cont.)

	OT	EPT	IEP	OT	EPT	IEP	OT	EPT	IEP
	All unemployed			Males			Females		
Number of children aged <18									
Ref : None									
One	0.002***	-0.001**	0.005***	-0.000	-0.001***	0.002	0.005***	-0.000	0.012***
	(0.0007)	(0.0002)	(0.0011)	(0.0008)	(0.0004)	(0.0014)	(0.0011)	(0.0004)	(0.0017)
Two	0.002**	-0.000	0.008***	-0.002*	-0.001	0.004**	0.006***	-0.000	0.016***
	(0.0008)	(0.0003)	(0.0014)	(0.0011)	(0.0004)	(0.0018)	(0.0013)	(0.0005)	(0.0022)
Three of more	0.002	-0.000	0.001	0.000	-0.000	-0.003	0.005**	-0.000	0.009**
	(0.0013)	(0.0004)	(0.0023)	(0.0016)	(0.0006)	(0.0029)	(0.0021)	(0.0007)	(0.0035)
Knowledge of state language									
Ref : education in Latvian									
Unknown or not tested	-0.016***	-0.001***	-0.012***	-0.013***	-0.001***	-0.014***	-0.020***	-0.001	-0.005
	(0.0007)	(0.0003)	(0.0017)	(0.0008)	(0.0004)	(0.0020)	(0.0013)	(0.0006)	(0.0031)
Highest grade	0.009***	-0.000	0.019***	0.007***	0.000	0.011***	0.011***	-0.000	0.024***
	(0.0014)	(0.0005)	(0.0021)	(0.0021)	(0.0008)	(0.0031)	(0.0021)	(0.0006)	(0.0029)
Medium grade	0.001	-0.001***	0.014***	0.001	-0.001***	0.008***	0.002	-0.000	0.018***
	(0.0010)	(0.0003)	(0.0017)	(0.0014)	(0.0004)	(0.0023)	(0.0016)	(0.0005)	(0.0025)
Lowest grade	-0.009***	-0.001***	0.025***	-0.005***	-0.001**	0.016***	-0.015***	-0.001**	0.038***
	(0.0009)	(0.0003)	(0.0022)	(0.0012)	(0.0005)	(0.0026)	(0.0015)	(0.0005)	(0.0036)
Previous activity									
Ref : Worked or self-employed									
New graduate or student	-0.001	-0.000	0.006	-0.000	-0.000	-0.001	-0.001	-0.001	0.018***
	(0.0020)	(0.0005)	(0.0038)	(0.0024)	(0.0007)	(0.0046)	(0.0035)	(0.0008)	(0.0064)
Maternity leave	-0.002	-0.001	0.001	-0.001	0.000	-0.000	-0.005	-0.001	0.002
	(0.0023)	(0.0006)	(0.0043)	(0.0089)	(0.0000)	(0.0166)	(0.0035)	(0.0009)	(0.0064)
Other or unknown	0.000	0.001	0.014***	-0.000	0.001	0.008	-0.001	0.002	0.022***
	(0.0022)	(0.0008)	(0.0043)	(0.0025)	(0.0010)	(0.0052)	(0.0038)	(0.0013)	(0.0069)
Work experience since 2005									
Ref: Without work experience									
Less than 1 year	0.006***	-0.000	0.005**	0.004***	-0.000	0.004	0.007***	-0.000	0.008**
	(0.0012)	(0.0003)	(0.0021)	(0.0015)	(0.0004)	(0.0028)	(0.0020)	(0.0006)	(0.0032)
1-3 years	-0.002	0.000	-0.006***	-0.002	0.001	-0.006**	-0.003	-0.001	-0.005*
	(0.0012)	(0.0004)	(0.0021)	(0.0015)	(0.0004)	(0.0029)	(0.0019)	(0.0006)	(0.0032)
More than 3 years	-0.003**	-0.000	-0.006**	-0.003	0.000	-0.006**	-0.003	-0.001	-0.003
	(0.0013)	(0.0004)	(0.0022)	(0.0016)	(0.0005)	(0.0031)	(0.0021)	(0.0007)	(0.0033)
Max Unemployment Benefit									
ref : No UB									
UB < =Ls 90	-0.013***	-0.002***	-0.019***	-0.011***	-0.002**	-0.016***	-0.016***	-0.002**	-0.020***
	(0.0018)	(0.0007)	(0.0029)	(0.0024)	(0.0011)	(0.0039)	(0.0027)	(0.0011)	(0.0042)
Ls 90 < UB < = Ls 150	-0.011***	-0.003***	-0.013***	-0.008***	-0.003***	-0.014***	-0.014***	-0.002**	-0.012***
	(0.0018)	(0.0008)	(0.0029)	(0.0024)	(0.0011)	(0.0039)	(0.0028)	(0.0011)	(0.0043)
Ls 150 < UB < = Ls 250	-0.009***	-0.003***	-0.008***	-0.008***	-0.003***	-0.010***	-0.011***	-0.003***	-0.005
	(0.0018)	(0.0008)	(0.0029)	(0.0024)	(0.0011)	(0.0039)	(0.0028)	(0.0011)	(0.0044)
Ls 250 < UB < = Ls 350	-0.008***	-0.004***	-0.004	-0.006***	-0.004***	-0.004	-0.010***	-0.003***	-0.003

	(0.0019)	(0.0008)	(0.0030)	(0.0024)	(0.0012)	(0.0040)	(0.0030)	(0.0012)	(0.0046)
Ls 350 < UB < = Ls 550	-0.008***	-0.003***	0.001	-0.008***	-0.004***	-0.002	-0.006*	-0.003**	0.006
	(0.0019)	(0.0009)	(0.0031)	(0.0025)	(0.0013)	(0.0041)	(0.0031)	(0.0013)	(0.0048)
UB > Ls 550	-0.011***	-0.004***	-0.001	-0.010***	-0.004***	-0.005	-0.009**	-0.004**	0.007
	(0.0022)	(0.0011)	(0.0035)	(0.0028)	(0.0016)	(0.0045)	(0.0037)	(0.0016)	(0.0055)

Table A2. Determinants of probability to undergo a training program - marginal effects (cont.)

	OT	EPT	IEP	OT	EPT	IEP	OT	EPT	IEP
	All unemployed			Males			Females		
Unemployment Benefits (waiting time) *ref : No UB or 0 months (immediate receipt)*									
1 month	0.012***	0.002***	0.038***	0.010***	0.002*	0.034***	0.016***	0.002**	0.041***
	(0.0016)	(0.0007)	(0.0025)	(0.0022)	(0.0010)	(0.0035)	(0.0025)	(0.0010)	(0.0037)
2 months	0.015***	0.003***	0.044***	0.013***	0.002*	0.035***	0.018***	0.003***	0.051***
	(0.0017)	(0.0008)	(0.0027)	(0.0023)	(0.0011)	(0.0037)	(0.0026)	(0.0011)	(0.0040)
3 months	0.018***	0.002**	0.050***	0.017***	0.002	0.046***	0.019***	0.002**	0.054***
	(0.0018)	(0.0008)	(0.0029)	(0.0024)	(0.0012)	(0.0039)	(0.0028)	(0.0011)	(0.0043)
4 or more months	0.023***	0.002**	0.065***	0.021***	0.001	0.055***	0.026***	0.003**	0.075***
	(0.0021)	(0.0009)	(0.0033)	(0.0027)	(0.0015)	(0.0046)	(0.0033)	(0.0013)	(0.0049)
Registration year (ref: 2008) *Ref : 2008*									
2009	0.007***	0.002***	0.020***	0.005***	0.002***	0.019***	0.009***	0.002***	0.019***
	(0.0007)	(0.0002)	(0.0011)	(0.0009)	(0.0002)	(0.0014)	(0.0012)	(0.0003)	(0.0017)
2010	-0.005***	0.003***	0.042***	-0.004***	0.003***	0.036***	-0.006***	0.003***	0.050***
	(0.0007)	(0.0003)	(0.0013)	(0.0009)	(0.0004)	(0.0017)	(0.0012)	(0.0004)	(0.0021)
2011	-0.017***	0.001***	-0.037***	-0.012***	0.001***	-0.034***	-0.022***	0.001**	-0.041***
	(0.0006)	(0.0002)	(0.0010)	(0.0008)	(0.0003)	(0.0012)	(0.0010)	(0.0003)	(0.0016)
SEA local office (*filiale*) *Ref: Riga regional*									
Jurmala	0.001	-0.001***	0.010***	-0.001	-0.001***	0.010***	0.002	-0.002***	0.010***
	(0.0013)	(0.0002)	(0.0023)	(0.0017)	(0.0002)	(0.0030)	(0.0020)	(0.0003)	(0.0034)
Limbazhi	0.002	0.005***	0.033***	-0.001	0.004***	0.026***	0.004	0.006***	0.042***
	(0.0017)	(0.0010)	(0.0037)	(0.0020)	(0.0013)	(0.0044)	(0.0029)	(0.0017)	(0.0060)
Ogre	0.001	-0.001***	0.020***	-0.003**	-0.001**	0.015***	0.006***	-0.001*	0.024***
	(0.0012)	(0.0003)	(0.0024)	(0.0014)	(0.0003)	(0.0030)	(0.0021)	(0.0005)	(0.0037)
Riga regional	0.014***	0.001	0.023***	0.004*	-0.000	0.028***	0.026***	0.001	0.017***
	(0.0022)	(0.0005)	(0.0034)	(0.0024)	(0.0004)	(0.0045)	(0.0038)	(0.0010)	(0.0050)
Tukums	0.010***	0.001	0.016***	0.003	0.001	0.011***	0.019***	0.000	0.021***
	(0.0017)	(0.0005)	(0.0028)	(0.0019)	(0.0006)	(0.0034)	(0.0031)	(0.0008)	(0.0046)
Kuldiga	0.007***	0.001	0.035***	0.000	0.001	0.027***	0.015***	0.001	0.045***
	(0.0019)	(0.0006)	(0.0038)	(0.0020)	(0.0008)	(0.0047)	(0.0035)	(0.0010)	(0.0062)
Liepaja	0.009***	0.001*	0.012***	0.004***	0.001**	0.015***	0.015***	0.000	0.009***
	(0.0012)	(0.0003)	(0.0018)	(0.0014)	(0.0005)	(0.0024)	(0.0019)	(0.0005)	(0.0027)
Saldus	0.004**	0.002***	0.026***	-0.005***	0.003***	0.009**	0.015***	0.001	0.045***
	(0.0018)	(0.0007)	(0.0035)	(0.0017)	(0.0011)	(0.0040)	(0.0034)	(0.0009)	(0.0061)
Talsi	0.007***	0.002***	0.035***	0.005**	0.002**	0.034***	0.008***	0.003**	0.035***
	(0.0017)	(0.0007)	(0.0033)	(0.0021)	(0.0008)	(0.0042)	(0.0027)	(0.0012)	(0.0051)
Ventspils	0.005***	-0.001***	0.026***	0.001	-0.001**	0.014***	0.009***	-0.001	0.039***

	(0.0016)	(0.0003)	(0.0028)	(0.0018)	(0.0003)	(0.0034)	(0.0026)	(0.0005)	(0.0045)
Balvi	0.016***	0.004***	0.049***	0.002	0.004***	0.058***	0.032***	0.004**	0.032***
	(0.0028)	(0.0011)	(0.0049)	(0.0027)	(0.0014)	(0.0064)	(0.0053)	(0.0019)	(0.0073)
Daugavpils	0.005***	0.002***	0.023***	0.002	0.001***	0.022***	0.007***	0.003***	0.025***
	(0.0011)	(0.0005)	(0.0018)	(0.0014)	(0.0005)	(0.0024)	(0.0017)	(0.0009)	(0.0027)

Table A2. Determinants of probability to undergo a training program - marginal effects (cont.)

	OT	EPT	IEP	OT	EPT	IEP	OT	EPT	IEP
	All unemployed			Males			Females		
Kraslava	0.020***	0.007***	0.024***	0.010***	0.008***	0.013***	0.033***	0.004**	0.039***
	(0.0029)	(0.0015)	(0.0039)	(0.0031)	(0.0020)	(0.0045)	(0.0054)	(0.0020)	(0.0068)
Ludza	0.018***	0.009***	0.050***	0.001	0.009***	0.053***	0.040***	0.010***	0.044***
	(0.0027)	(0.0016)	(0.0044)	(0.0025)	(0.0020)	(0.0057)	(0.0053)	(0.0025)	(0.0067)
Preili	0.015***	0.005***	0.063***	0.008***	0.009***	0.059***	0.024***	-0.000	0.066***
	(0.0024)	(0.0011)	(0.0043)	(0.0027)	(0.0018)	(0.0055)	(0.0042)	(0.0009)	(0.0067)
Rezekne	0.020***	0.009***	0.061***	0.013***	0.010***	0.062***	0.026***	0.006***	0.058***
	(0.0018)	(0.0010)	(0.0029)	(0.0021)	(0.0014)	(0.0038)	(0.0030)	(0.0013)	(0.0045)
Aluksne	-0.000	0.002**	0.029***	-0.005**	0.002	0.027***	0.005	0.003	0.032***
	(0.0021)	(0.0009)	(0.0046)	(0.0021)	(0.0011)	(0.0056)	(0.0038)	(0.0017)	(0.0076)
Cesis	0.003**	-0.000	0.012***	-0.000	-0.000	0.006*	0.007***	-0.000	0.018***
	(0.0014)	(0.0003)	(0.0027)	(0.0017)	(0.0003)	(0.0032)	(0.0025)	(0.0006)	(0.0044)
Gulbene	0.011***	0.000	0.034***	0.002	0.000	0.031***	0.022***	0.000	0.036***
	(0.0027)	(0.0007)	(0.0048)	(0.0027)	(0.0008)	(0.0058)	(0.0050)	(0.0012)	(0.0077)
Madona	0.011***	0.003***	0.035***	0.005**	0.004***	0.023***	0.017***	0.002*	0.049***
	(0.0021)	(0.0008)	(0.0037)	(0.0023)	(0.0012)	(0.0044)	(0.0037)	(0.0012)	(0.0062)
Valka	0.011***	0.009***	0.046***	0.003	0.013***	0.040***	0.021***	0.006***	0.054***
	(0.0025)	(0.0016)	(0.0046)	(0.0027)	(0.0025)	(0.0058)	(0.0045)	(0.0020)	(0.0073)
Valmiera	-0.000	-0.000	0.013***	0.002	0.000	-0.003	-0.004**	-0.001	0.031***
	(0.0013)	(0.0003)	(0.0026)	(0.0018)	(0.0004)	(0.0029)	(0.0019)	(0.0005)	(0.0044)
Aizkraukle	0.004**	0.001	0.022***	-0.005***	0.001	0.016***	0.016***	0.001	0.028***
	(0.0017)	(0.0006)	(0.0032)	(0.0016)	(0.0007)	(0.0039)	(0.0034)	(0.0010)	(0.0053)
Bauska	0.010***	0.002***	0.020***	0.000	0.002***	0.010***	0.023***	0.001	0.032***
	(0.0017)	(0.0006)	(0.0028)	(0.0017)	(0.0008)	(0.0033)	(0.0032)	(0.0009)	(0.0047)
Dobele	0.013***	-0.001***	0.037***	0.001	0.000	0.032***	0.029***	-0.001	0.041***
	(0.0020)	(0.0003)	(0.0035)	(0.0020)	(0.0000)	(0.0043)	(0.0039)	(0.0006)	(0.0056)
Jekabpils	0.011***	0.001*	0.014***	0.005**	0.001	0.013***	0.018***	0.001	0.015***
	(0.0019)	(0.0005)	(0.0029)	(0.0022)	(0.0006)	(0.0036)	(0.0032)	(0.0009)	(0.0045)
Jelgava	0.004***	0.001*	0.008***	0.003*	0.000	0.002	0.005***	0.001	0.016***
	(0.0011)	(0.0004)	(0.0018)	(0.0014)	(0.0004)	(0.0022)	(0.0018)	(0.0006)	(0.0029)
Participation in short ALMP measures	0.019***	0.000	0.057***	0.013***	0.000	0.046***	0.025***	0.000	0.069***
	(0.0006)	(0.0002)	(0.0011)	(0.0007)	(0.0003)	(0.0013)	(0.0011)	(0.0003)	(0.0017)
Observations	363454	356695	381876	188893	182550	197173	171663	169051	184703

Notes: Probit models with participation in training as dependent variable. Table reports average marginal effects (AME). The models are those used for propensity score matching estimates and should be interpreted with caution.

Table A3. Matching estimates of post-treatment employment outcomes at 6 an 18 months horizons

[LIKELY TO BE DROPPED]

	Occupational training (OT)	Employer provided training (EPT) [a]	Informal education programs (IEP) [b]	Occupational training (OT)	Employer provided training (EPT) [a]	Informal education programs (IEP) [b]
	Control group: "No ALMP"			Control group: "Short ALMP Measures Only"		
	Exit, within 6 months, to employment lasting 3 or more months					
Matching Estimator	0.184***	0.547***	0.117***	0.170***	0.534***	0.127***
	(0.0111)	(0.0322)	(0.0065)	(0.0110)	(0.0319)	(0.0060)
Median bias before/after matching	7.6/1.2	7.6/2.1	7.6/1.1	5.1/0.9	5.1/2.0	5.1/0.6
	Exit, within 18 months, to employment lasting 3 or more months					
Matching Estimator	0.167***	0. 443***	0.108***	0.110***	0.409***	0.048***
	(0 .0073)	(0.0187)	(0.0048)	(0.0069)	(0.0185)	(0.0040)
Median bias before/after matching	8.9/0.9	8.9/1.7	8.9/0.8	3.7/0.7	3.7/1.9	3.7/0.3
	Employment in month 6					
Matching Estimator	0.159***	0.360***	0.107***	0.140***	0.347***	0.114***
	(0.0110)	(0.0391)	(0.0064)	(0.0108)	(0.0389)	(0.0059)
Median Bias before/after matching	7.6/1.2	7.6/2.1	7.6/1.1	5.1/0.9	5.1/2.0	5.1/0.6
	Employment in month 18					
Matching Estimator	0.106***	0.118***	0.075***	0.056***	0.125***	0.026***
	(0.0074)	(0.0263)	(0.0048)	(0.0071)	(0.0261)	(0.0041)
Median Bias before/after matching	8.9/0.9	8.9/2.7	8.9/0.8	3.7/0.7	3.7/1.9	3.7/0.3
Obs - 6 months horizon	137,049	134,648	143,201	232,569	230,168	238,721
Obs - 18 months horizon	127,364	121,299	141,549	198,729	192,664	212,914

Notes: *Notes***:** Elapsed time: Trained – within 18 months since end of training; Others - within 18 months after being granted status of unemployed. Common support matching on the following characteristics: gender, age (5 groups), education (7 categories), ethnicity, citizenship, certified state language skills (5 categories), region (28 SEA local offices), family status, number of children aged <18, work experience since January 2005, year of registration as unemployed, status before becoming unemployed (4 categories), max monthly unemployment benefit (7 categories). Matching procedure: 5 nearest neighbors; 2% trimmed; the distance between treated and the matched controls does not exceed 1% of propensity score. [a] Strong effects of EPT programs on exit to job within 6 and 18 months, as well as on employment at the 6 months horizon is to a large extent related to the institutional setting of these programs which involves wage and other subsidies during the training and mandates an exit to job with the same employer for at least 6 months immediately after training. [b]

Table A4. Matching estimates of post-registration employment outcomes at 6 an 18 months horizons

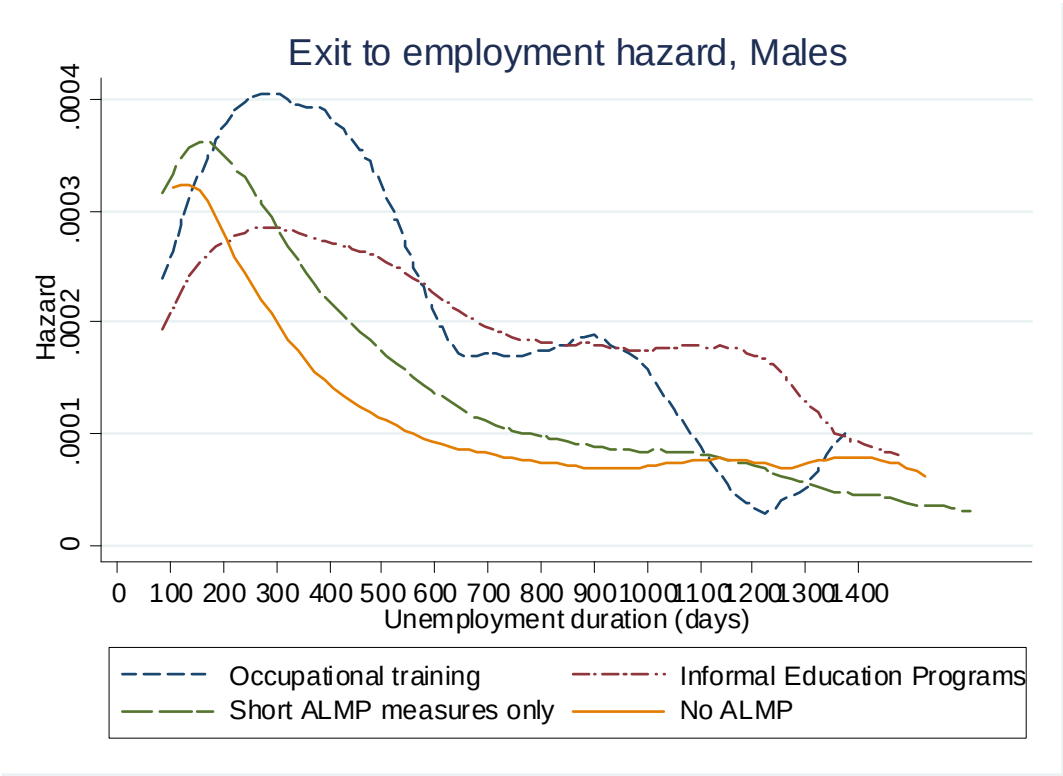
	Occupational training (OT)	Employer provided training (EPT) [a]	Informal education programs (IEP) [b]	Occupational training (OT)	Employer provided training (EPT) [a]	Informal education programs (IEP) [b]
	Control group: "No ALMP"			Control group: "Short ALMP Measures Only"		
	Exit, within 6 months, to employment lasting 3 or more months					
Matching Estimator	-0.038***	0 .482***	-0.094***	-0.050***	0.464***	-0.085***
	(0.0099)	(0.0353)	(0 .0058)	(0.0098)	(0.0352)	(0.0052)
Median bias before/after matching	7.6/1.2	7.6/2.1	7.6/1.1	5.1/0.9	5.1/2.0	5.1/0.6
	Exit, within 18 months, to employment lasting 3 or more months					
Matching Estimator	0.074***	0.422***	-0.000	0.019***	0.401***	-0.060***
	(0.0071)	(0.0154)	(0.0045)	(0.0067)	(0.0151)	(0.0038)
Median bias before/after matching	8.5/0.9	8.5/1.4	8.5/0.8	3.2/0.5	3.2/1.5	3.2/0.4
	Employment in month 6					
Matching Estimator	-0.008	0 .571***	-0.068***	-0.026***	0.552***	-0.062***
	(0.0099)	(0.0323)	(0.0057)	(0.0097)	(0.0322)	(0.0052)
Median Bias before/after matching	7.6/1.2	7.6/2.1	7.6/1.1	5.1/0.9	5.1/2.0	5.1/0.6
	Employment in month 18					
Matching Estimator	0.107***	0.223***	0.044***	0.062***	0.226***	-0.007*
	(0.0070)	(0.0205)	(0.0044)	(0.007)	(0.0203)	(0.0038)
Median Bias before/after matching	8.5/0.9	8.5/1.4	8.5/0.8	3.2/0.5	3.2/1.5	3.2/0.4
Obs - 6 months horizon	137,049	134,648	143,201	232,569	230,168	238,721
Obs - 18 months horizon	128,090	121,602	145,473	199,455	192,967	216,838

Notes: *Notes***:** Elapsed time: Within 6 or 18 months after being granted status of unemployed. [a] Strong effects of EPT programs on exit to job within 6 and 18 months, as well as on employment at the 6 months horizon is to a large extent related to the institutional setting of these programs which involves wage and other subsidies during the training and mandates an exit to job with the same employer for at least 6 months immediately after training Common support matching on the following characteristics: gender, age (5 groups), education (7 categories), ethnicity, citizenship, certified state language skills (5 categories), region (28 SEA local offices), family status, number of children aged <18, work experience since January 2005, year of registration as unemployed, status before becoming unemployed (4 categories), max monthly unemployment benefit (7 categories). Matching procedure: 5 nearest neighbors; 2% trimmed; the distance between treated and the matched controls does not exceed 1% of propensity score.

APPENDIX B

Figures

Figure B1. Hazard of exit to employment lasting at least 3 months by time since registration at SEA



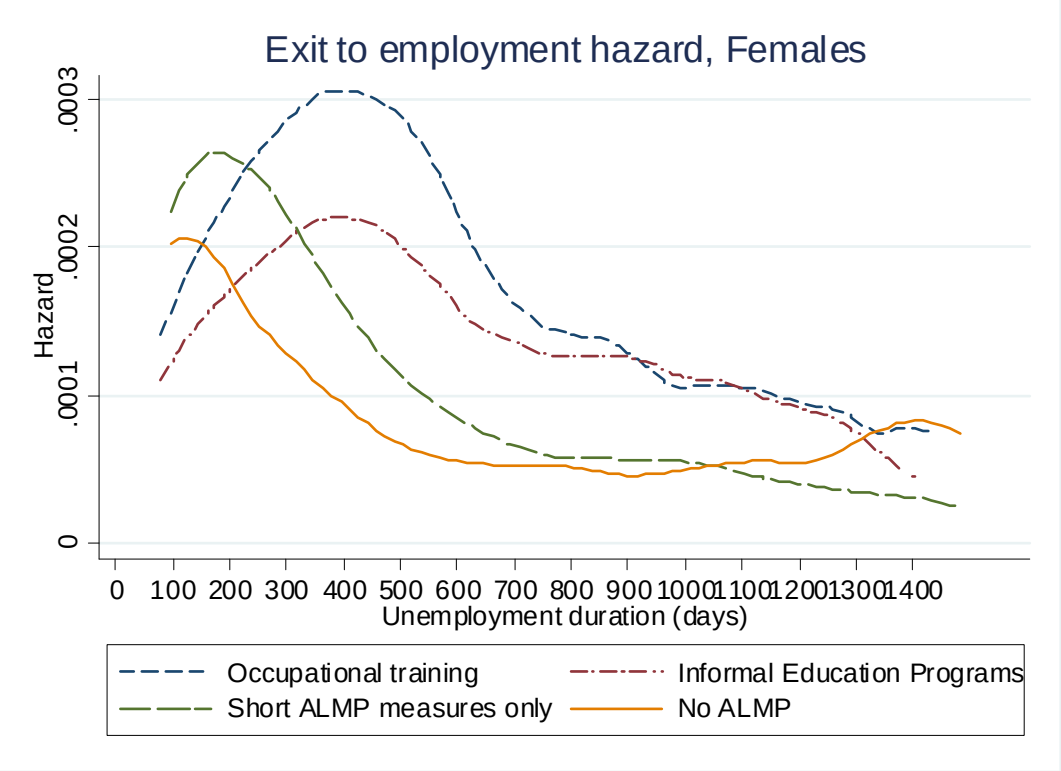
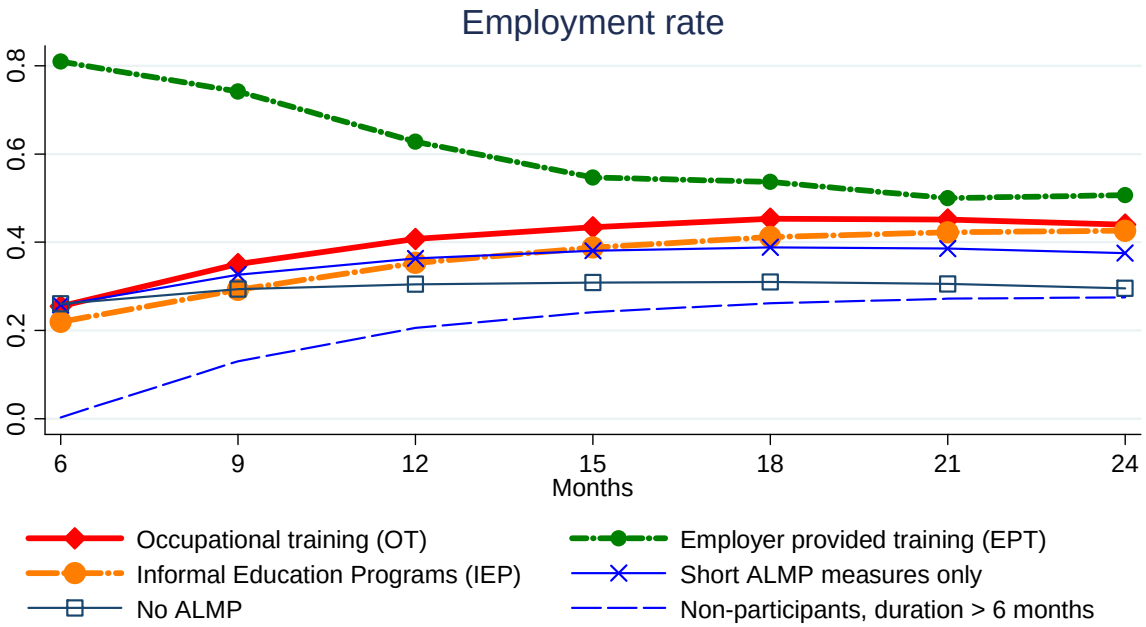
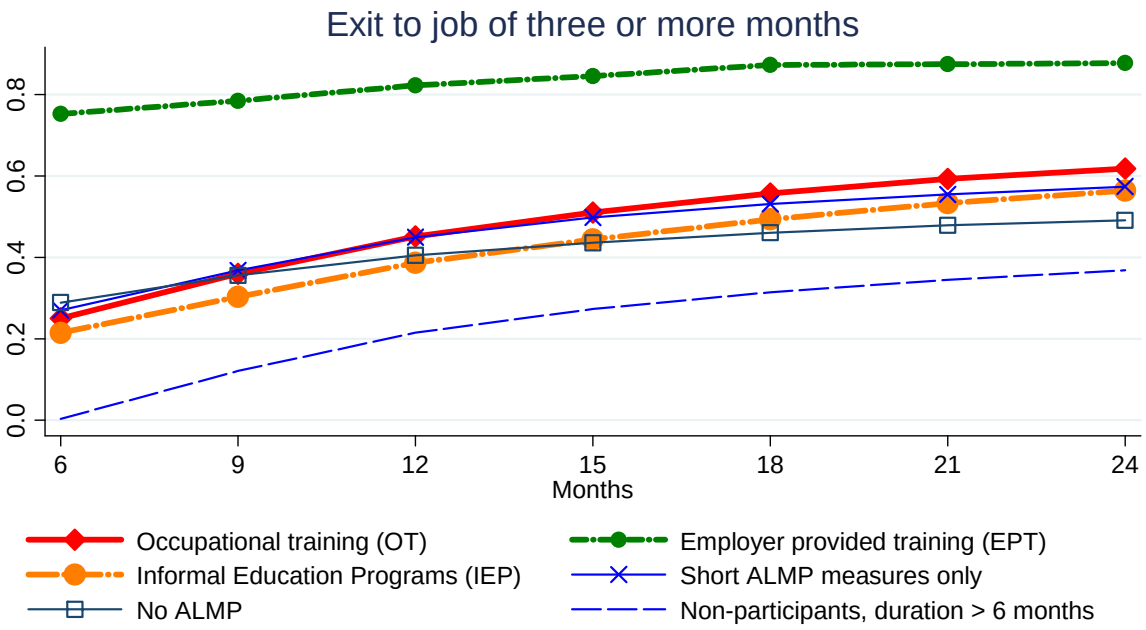


Figure B2. Outcomes 6 to 24 months after receiving status of unemployed, by ALMP participation

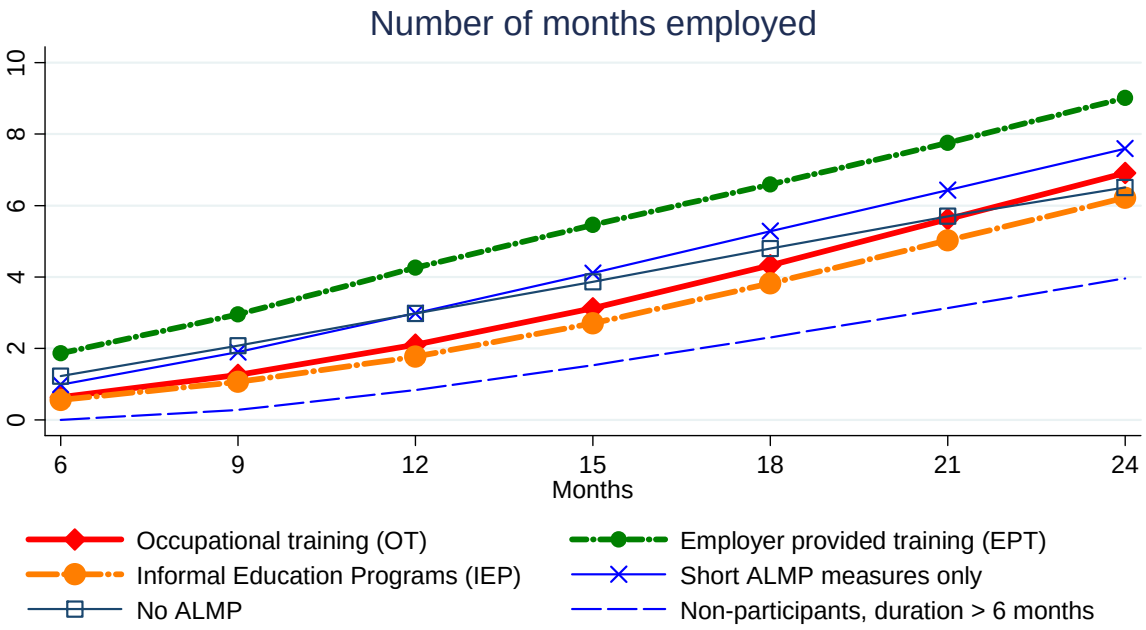


Note: By time elapsed after being granted status of unemployed.

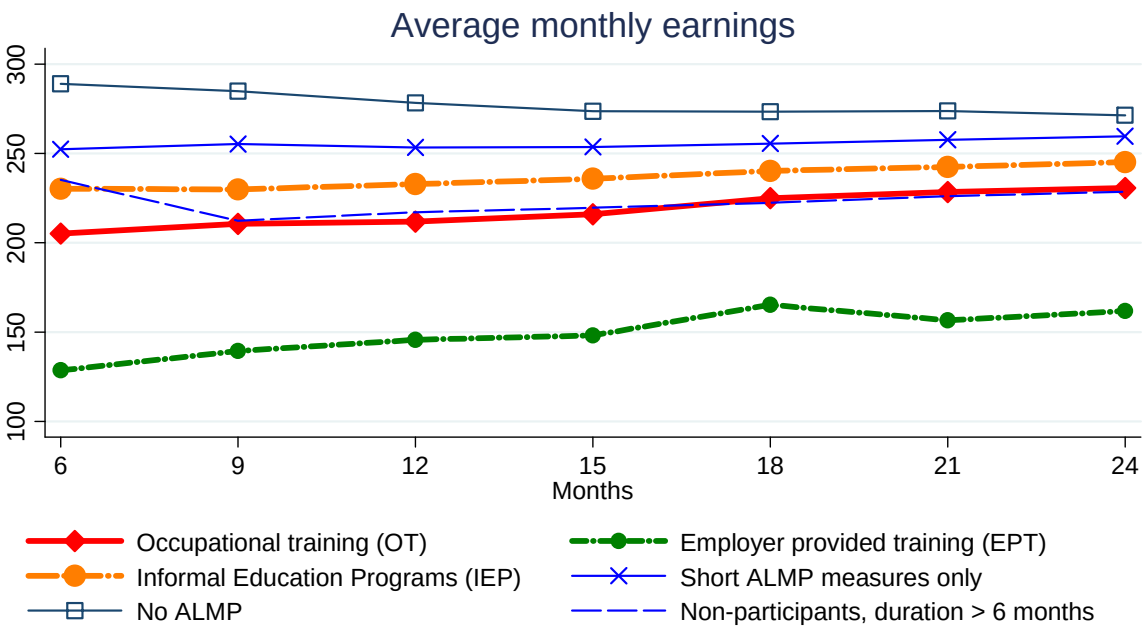


Note: By time elapsed after being granted status of unemployed.

Figure B2. Outcomes 6 to 24 months after receiving status of unemployed, by ALMP participation (cont.)

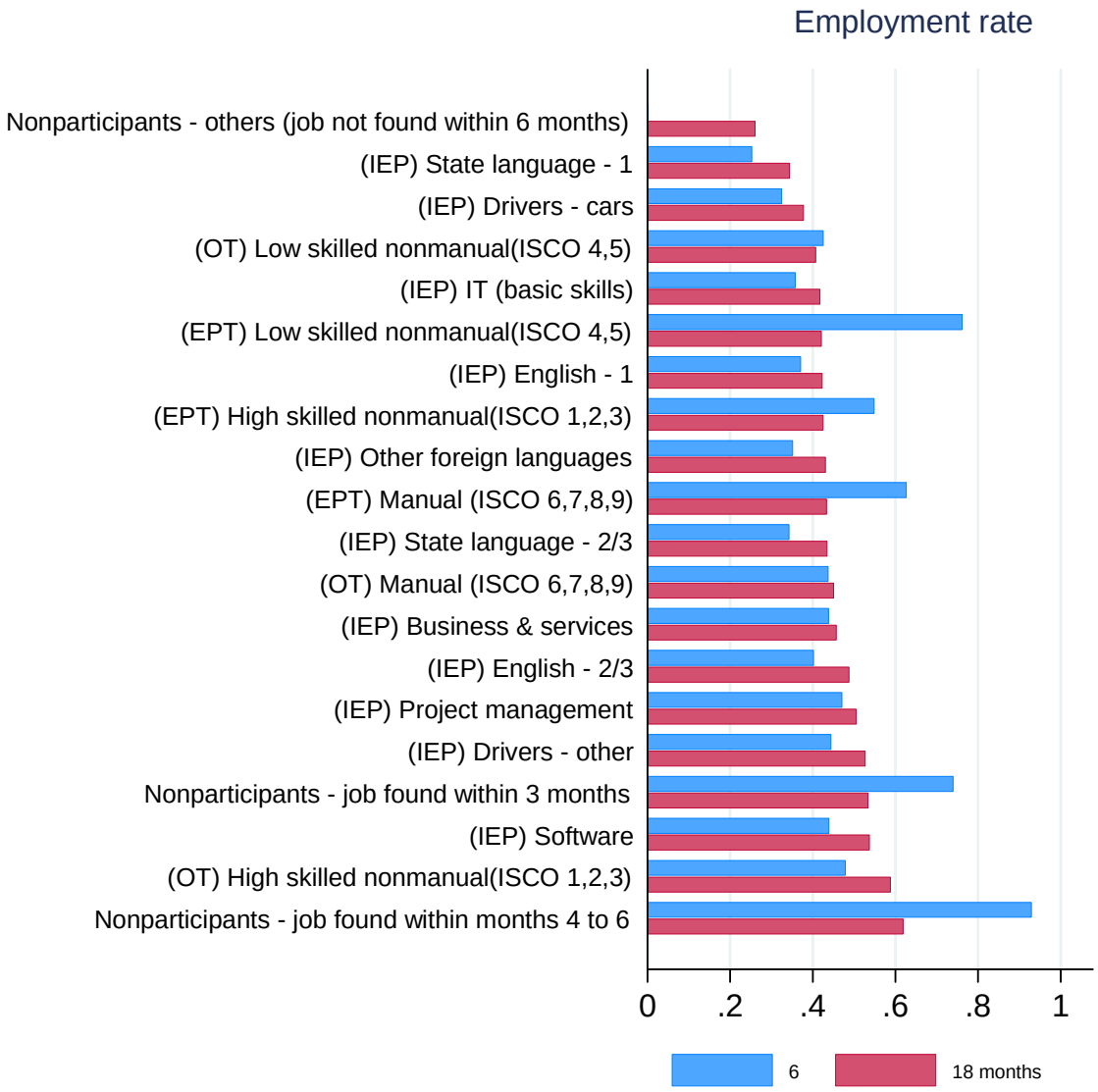


Note: By time elapsed after being granted status of unemployed.



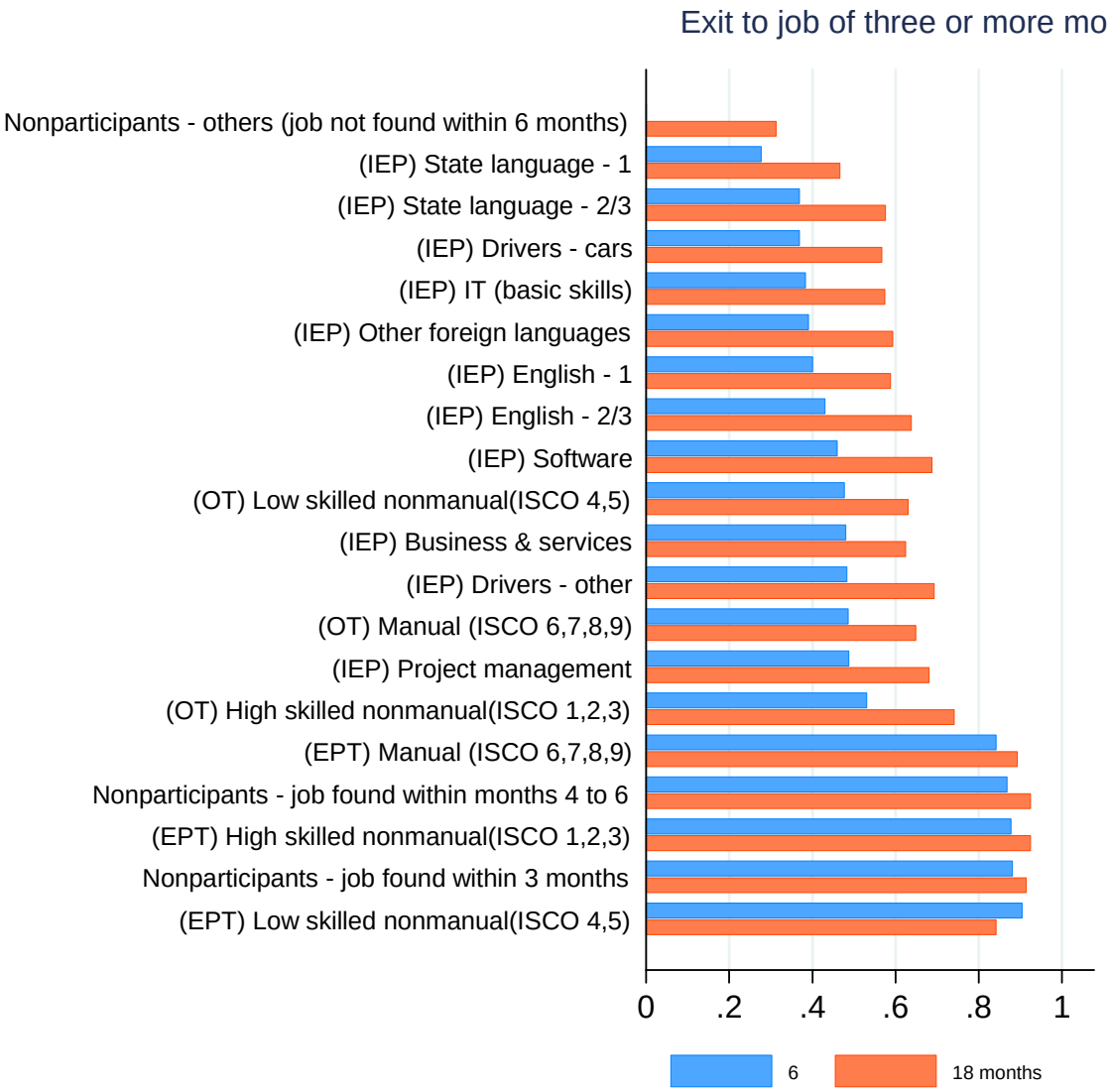
Note: By time elapsed after being granted status of unemployed.

Figure B3. Employment rate at 6- and 18-months post-training horizons, by program group



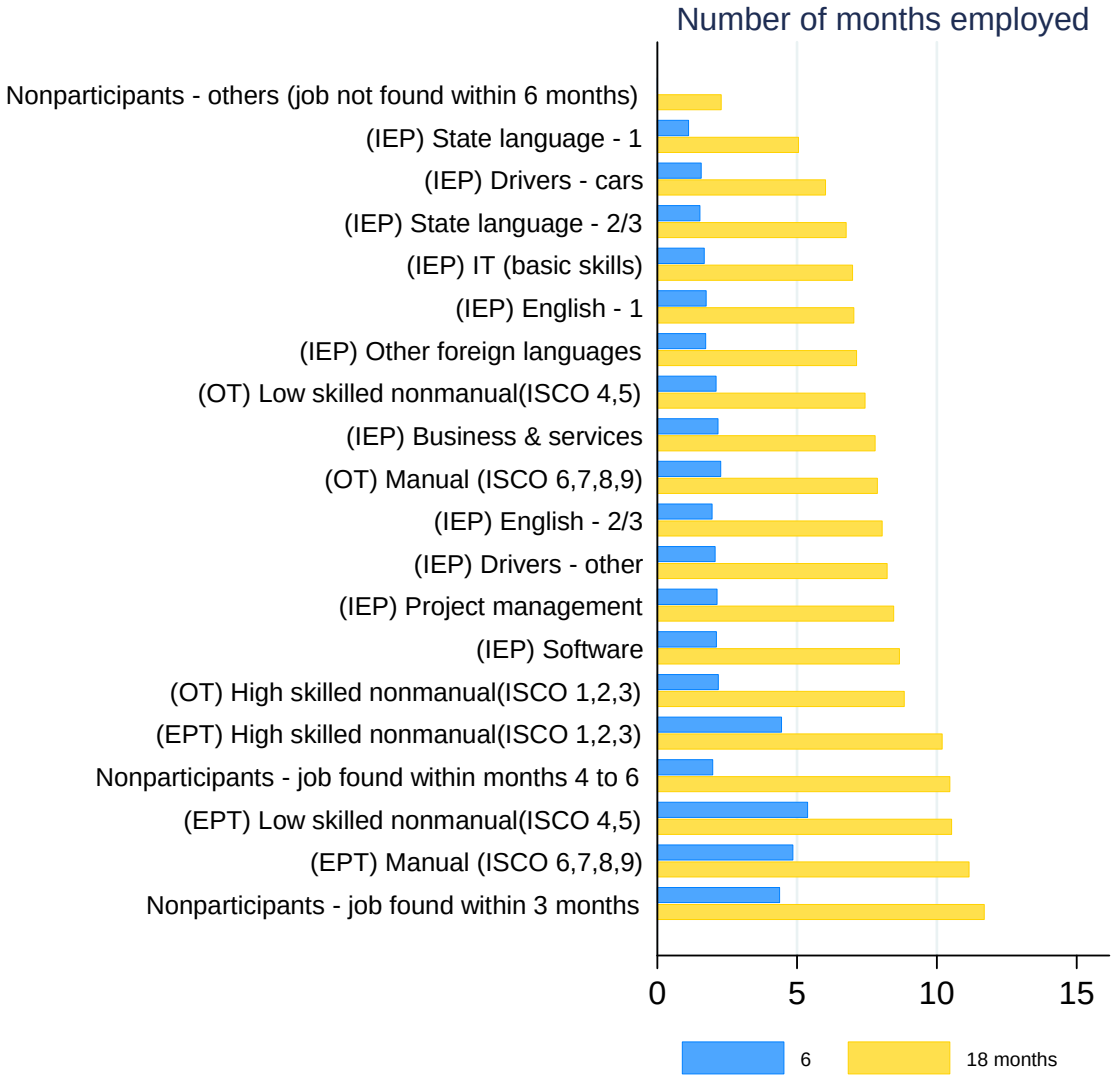
Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

Figure B4. Exit, in 6 and 18 post-training months, to job lasting three or more months, by program group



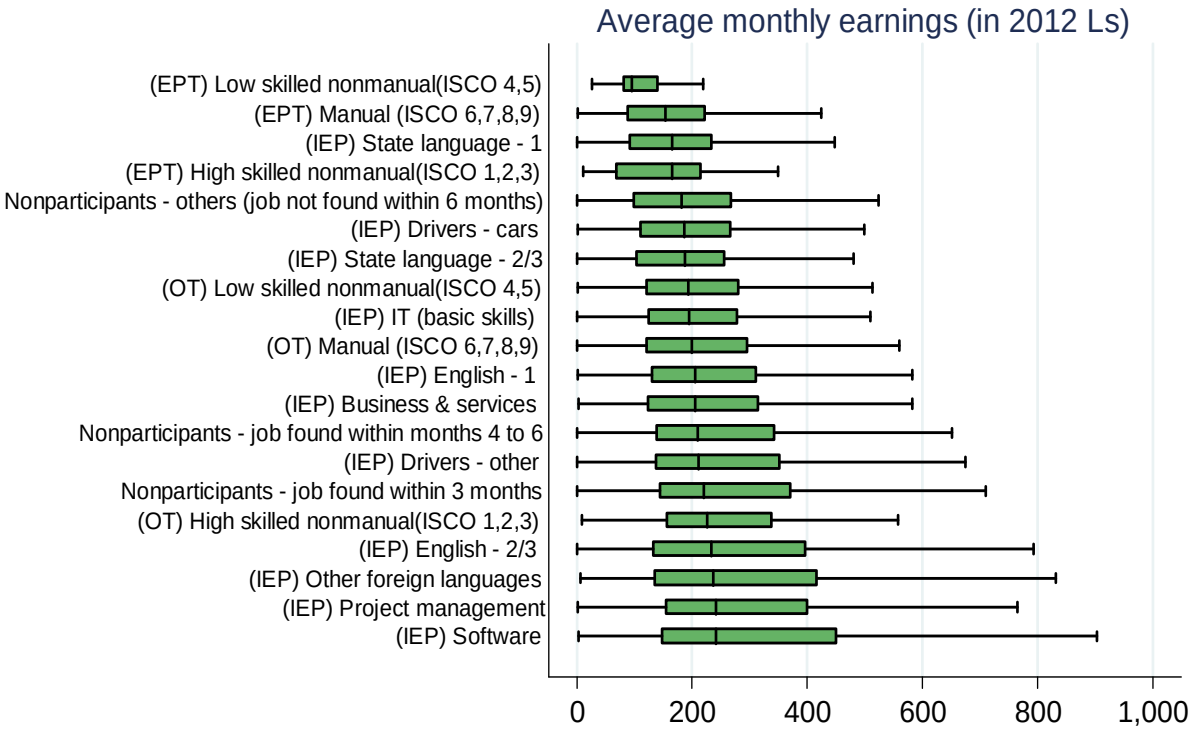
Note : Trained: within 6 or 18 months after training completion ; Others: after being granted status of unemployed.

Figure B5. Total time worked during 6 and 18 post-training months, by program group



Note : Trained: within 6 or 18 months after training completion;
Others: after being granted status of unemployed.

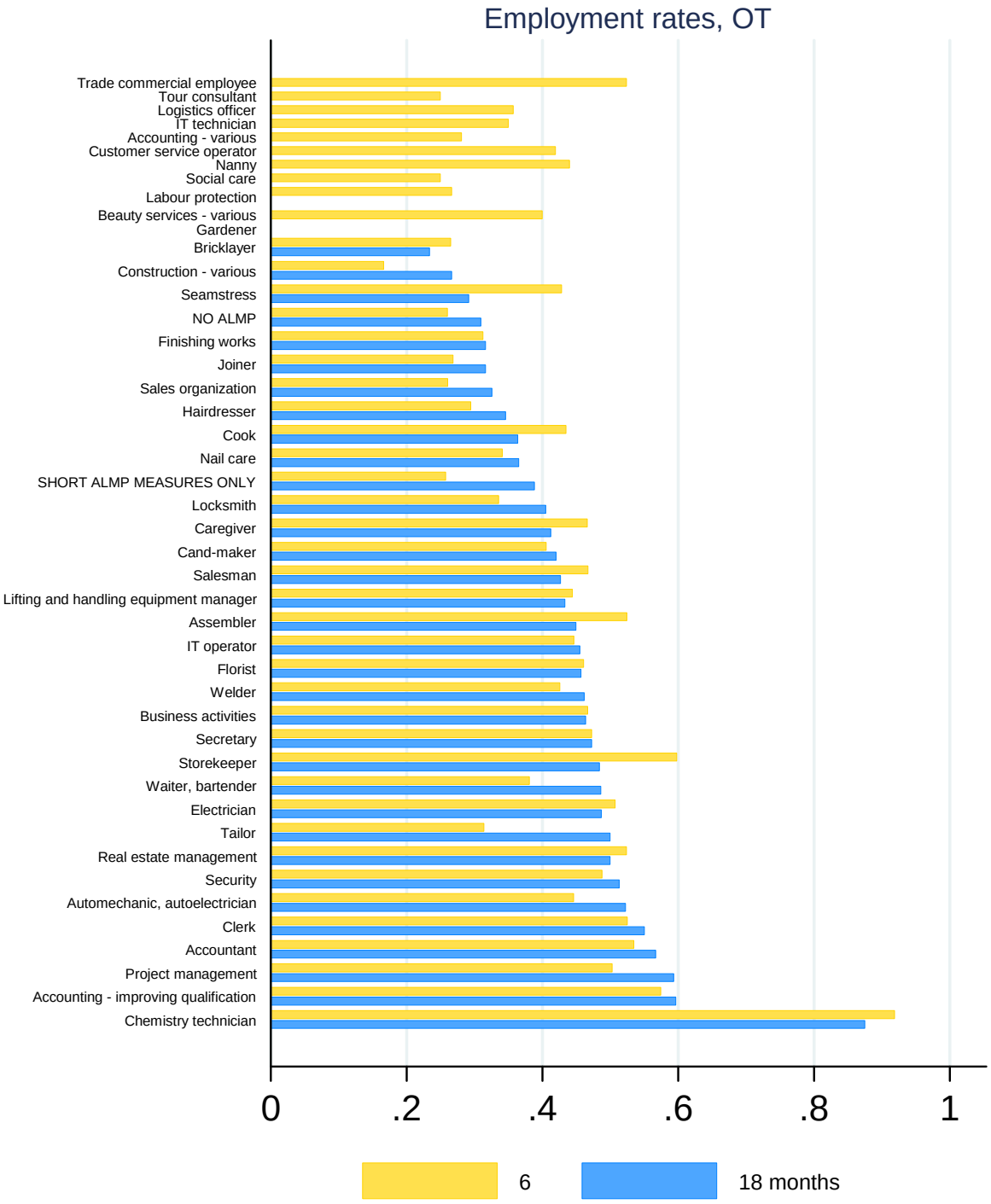
Figure B6. Average monthly earnings in months worked during 18 post-training months, by program group



Note: (Gross average earnings / number of months worked) within 18 months.

Trained: after training completion; Others: - after being granted status of unemployed.

Figure B7. Employment rate at 6- and 18-months post-training horizons, by narrow program. Occupational training.



Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

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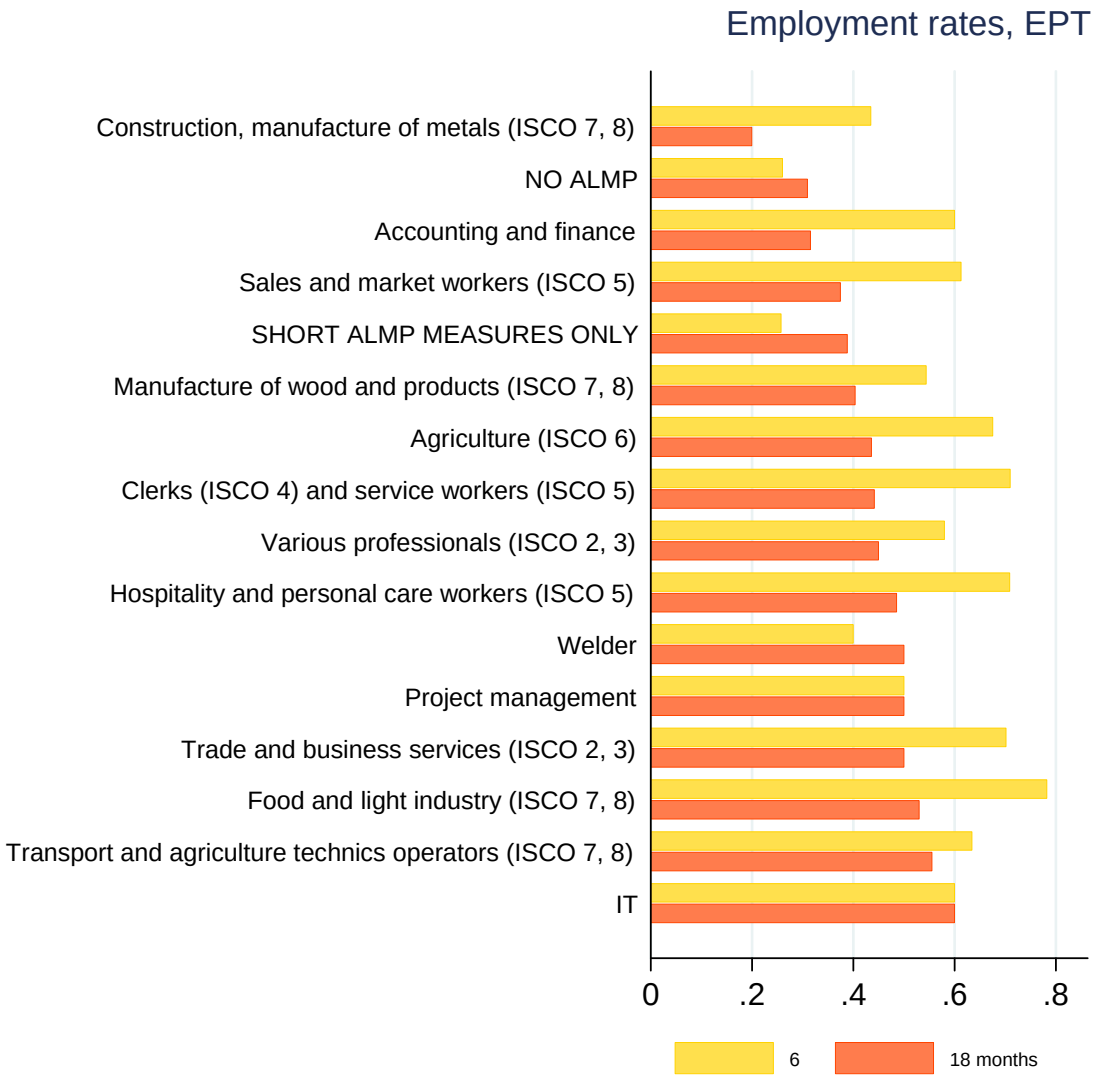
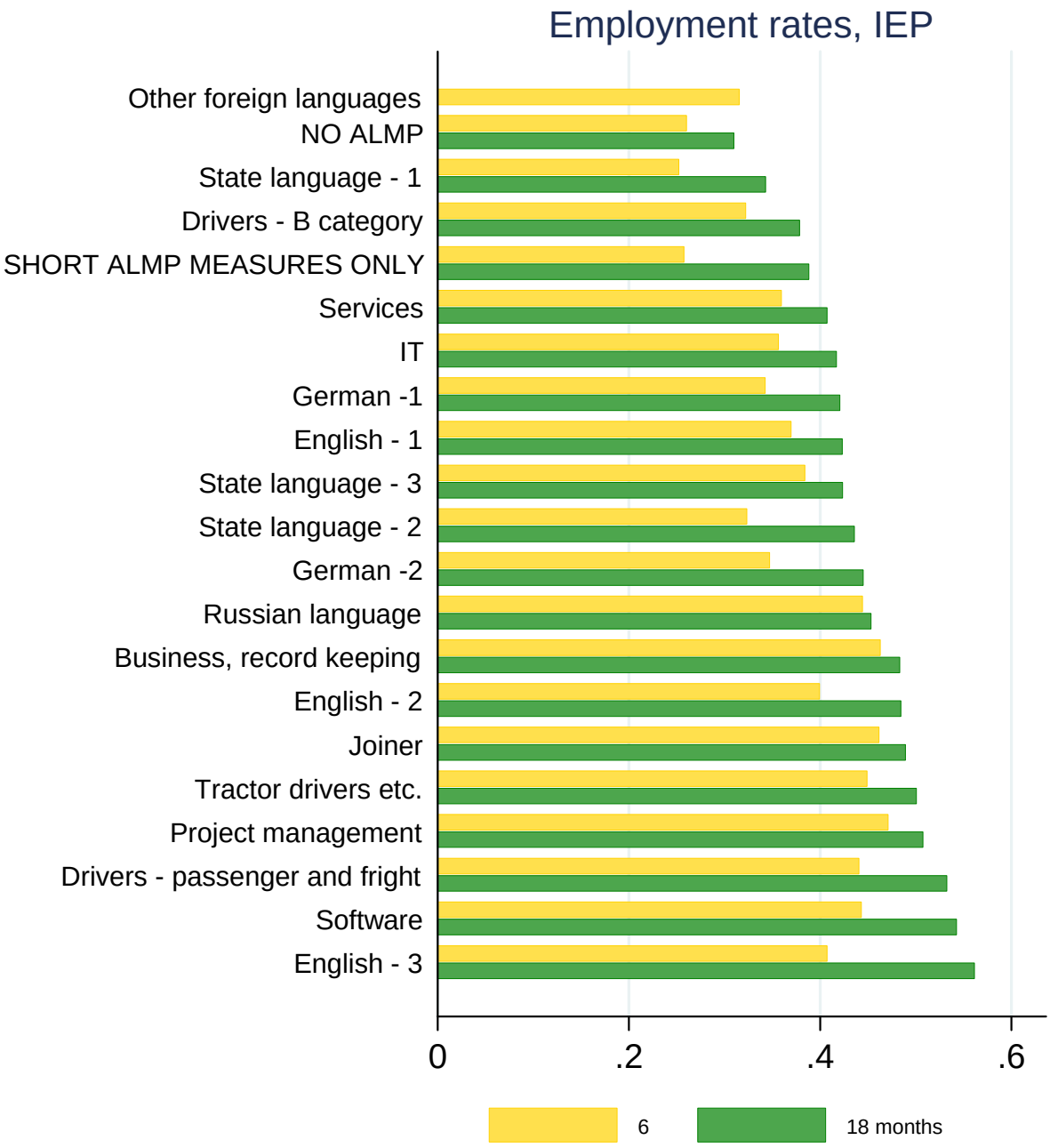
Figure B8. Employment rate at 6- and 18-months post-training horizons, by narrow program. Employer provided training.



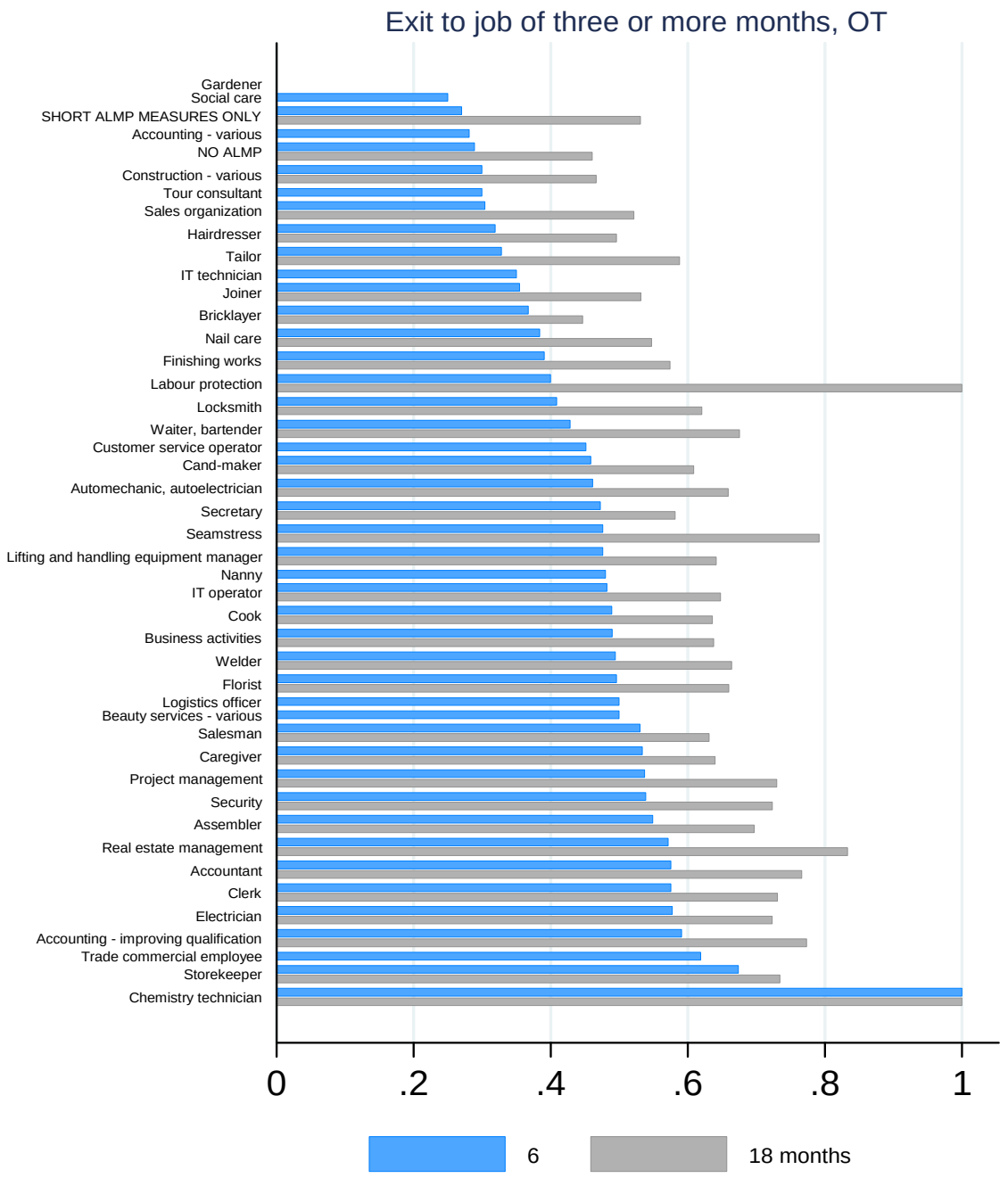
Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

Figure B9. Employment rate at 6- and 18-months post-training horizons, by narrow program. Informal education programs



Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

Figure B10. Exit, in 6 and 18 post-training months, to job lasting three or more months, by narrow occupational training program

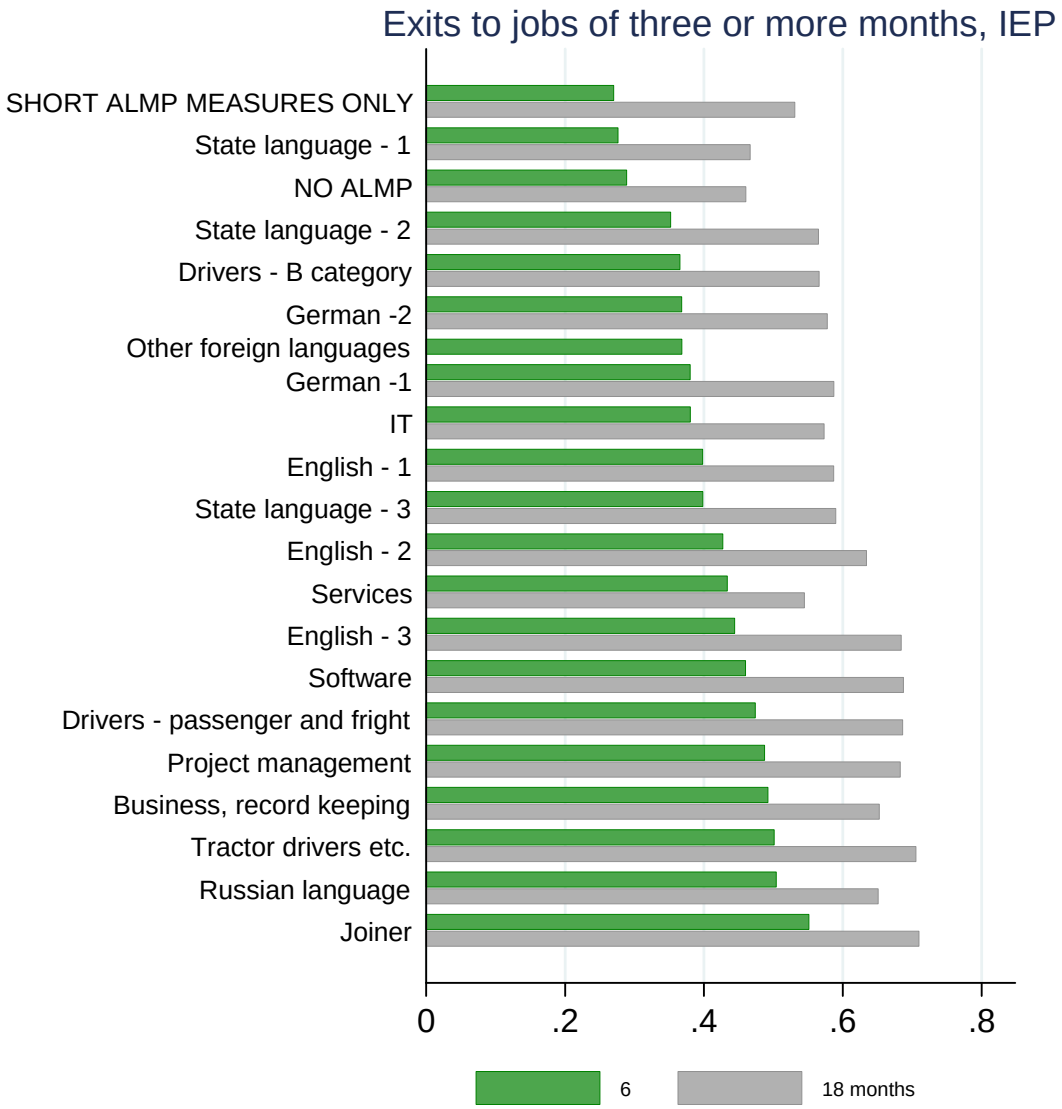


Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

Figure B11. Exit, in 6 and 18 post-training months, to job lasting three or more months, by narrow employer provided training program

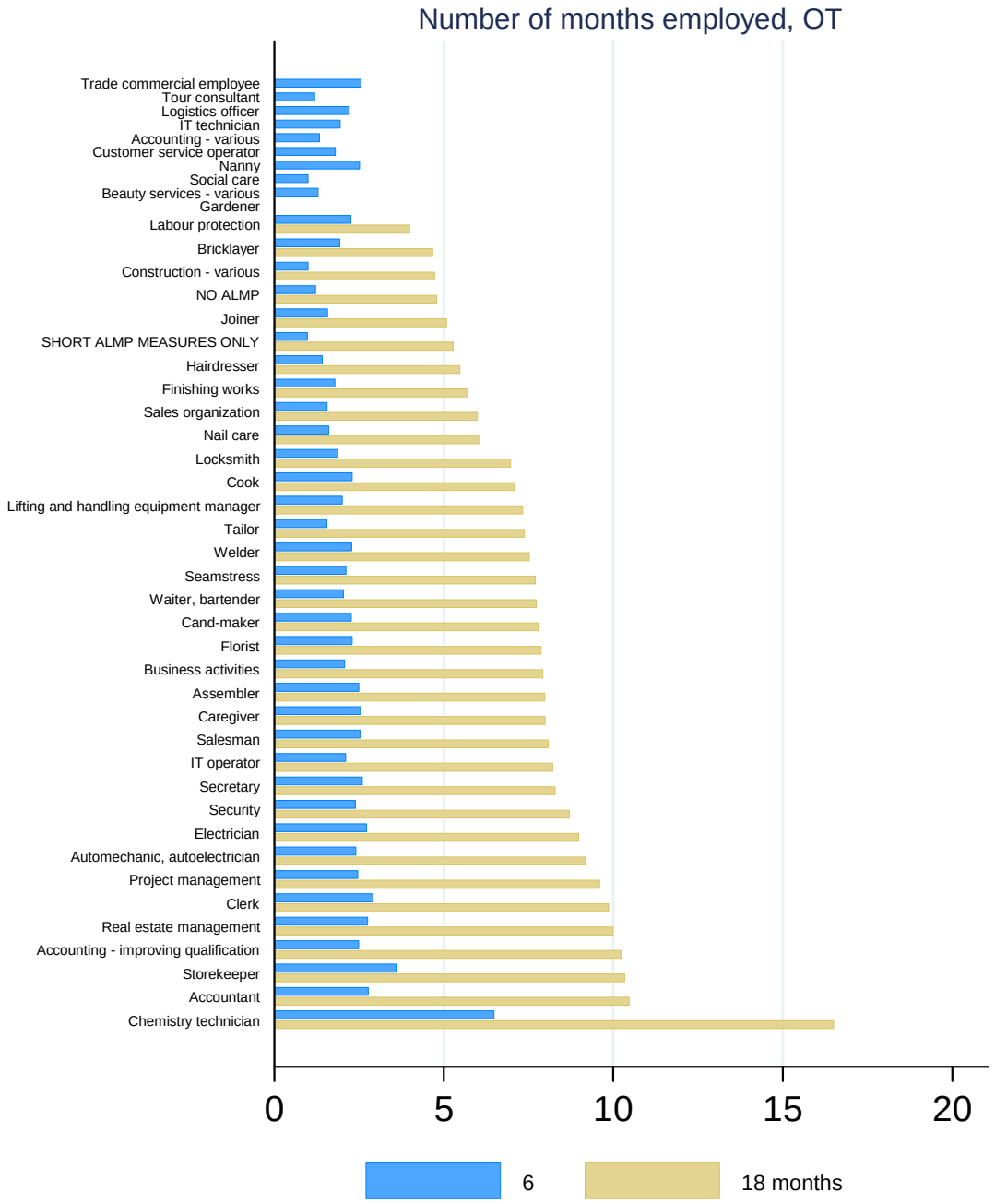
Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

Figure B12. Exit, in 6 and 18 post-training months, to job lasting three or more months, by narrow informal education program



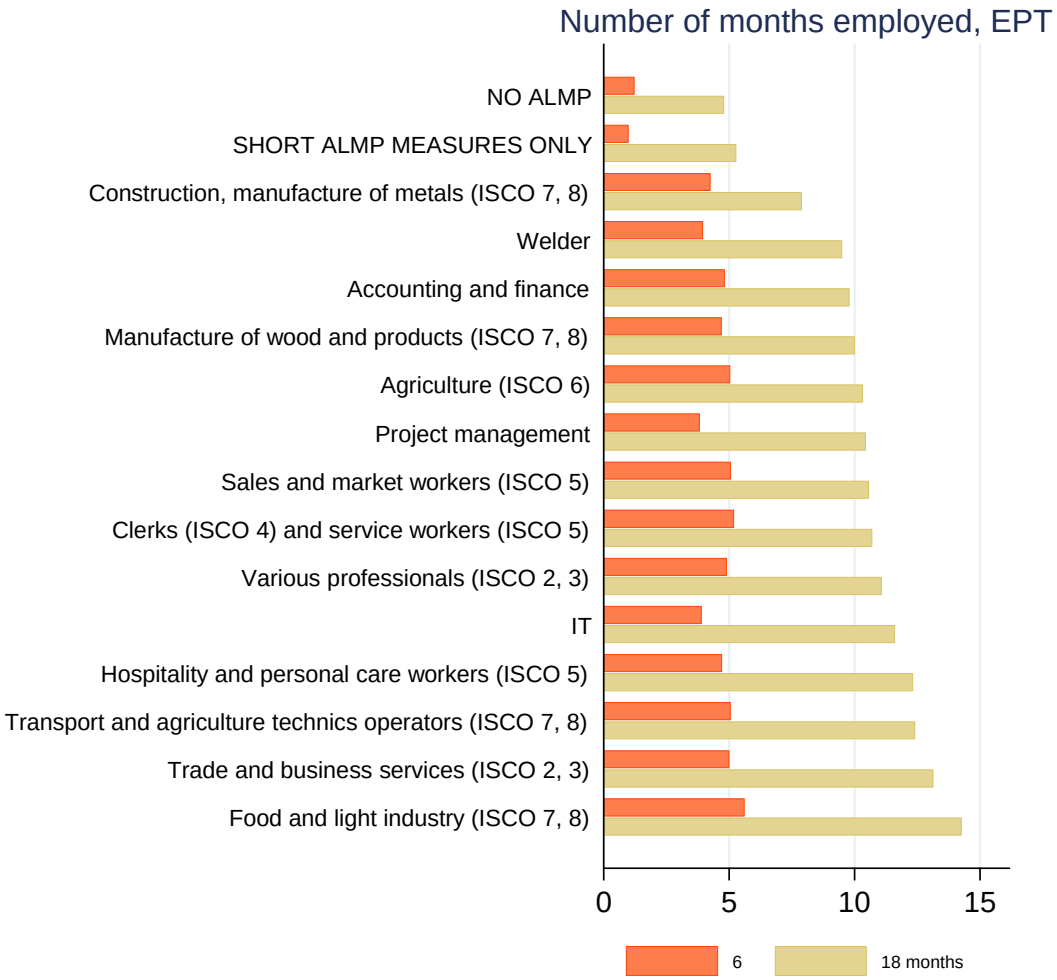
Note : Trained: within 6 or 18 months after training completion;
Others: after being granted status of unemployed.

Figure B13. Total time worked in 18 post-training months, by narrow occupational training program



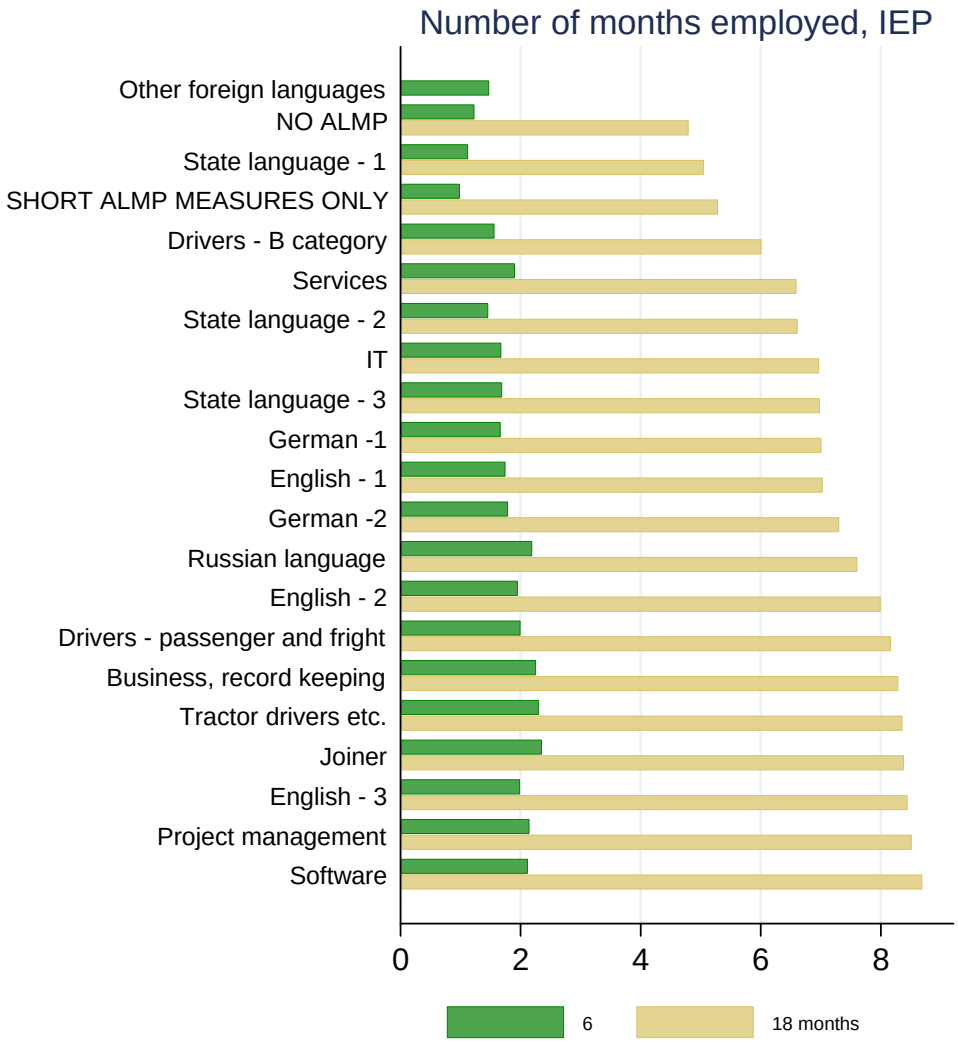
Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

Figure B14. Total time worked in 18 post-training months, by narrow employer provided training program



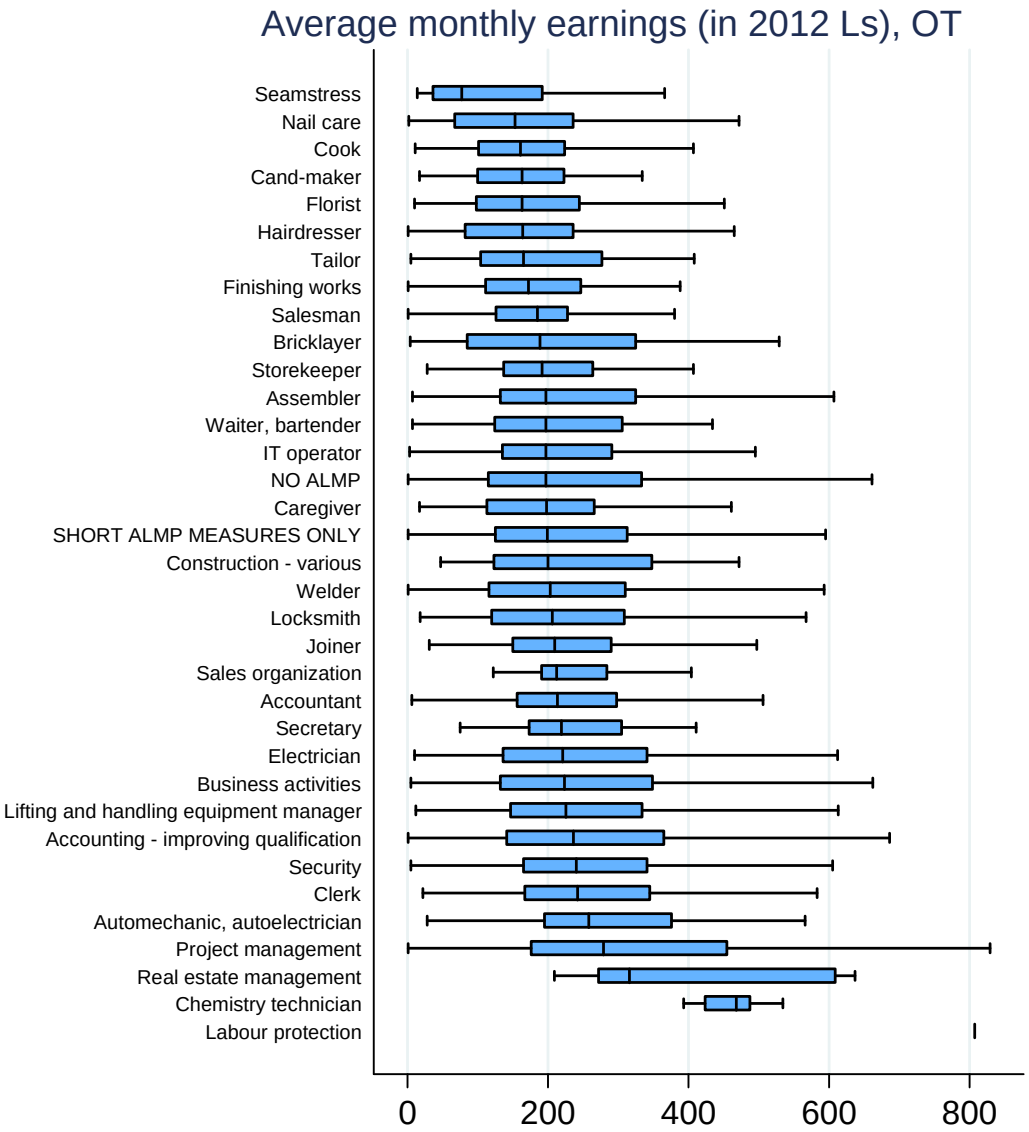
Note : Trained: within 6 or 18 months after training completion; Others: after being granted status of unemployed.

Figure B15. Total time worked in 18 post-training months, by narrow informal education program



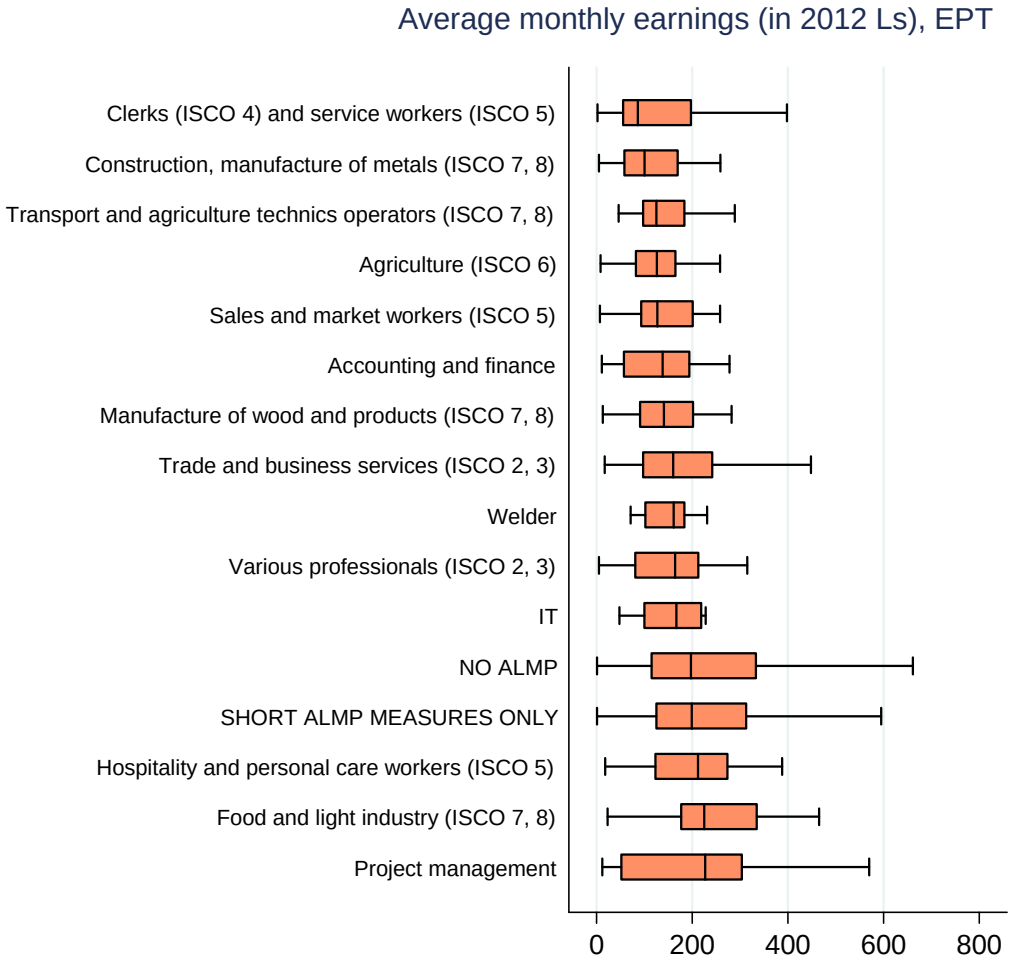
Note : Trained: within 6 or 18 months after training completion;
Others: after being granted status of unemployed.

Figure B16. Average monthly earnings in months worked during 18 post-training months, by narrow occupational training program



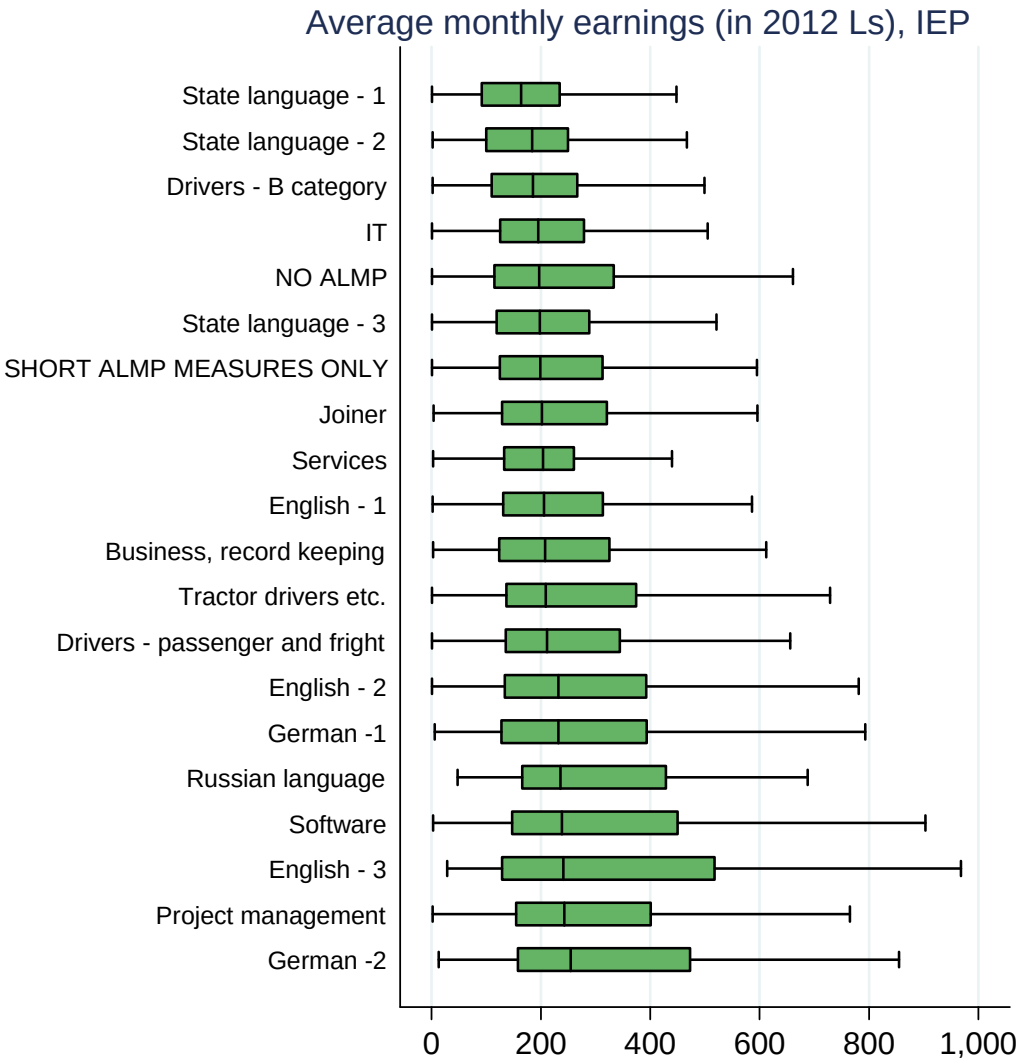
Note: (Gross average earnings / number of months worked) within 18 months.
Trained: after training completion; Others: - after being granted status of unemployed.

Figure B17. Average monthly earnings in months worked during 18 post-training months, by narrow employer provided program



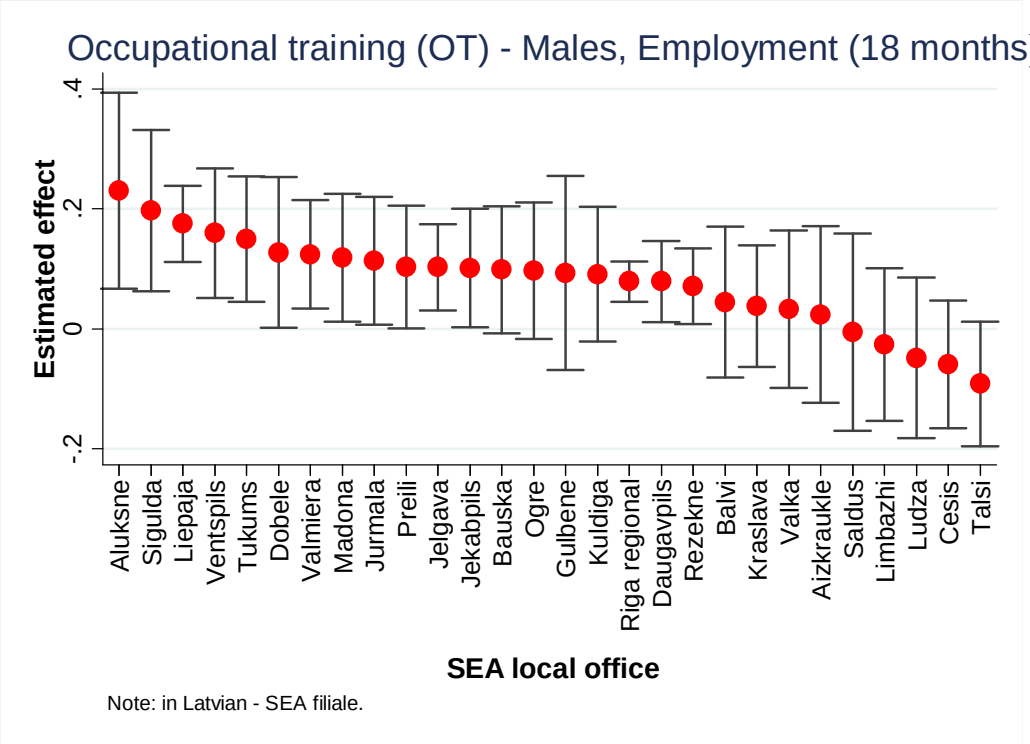
Note: (Gross average earnings / number of months worked) within 18 months.
Trained: after training completion; Others: - after being granted status of unemployed.

Figure B18. Average monthly earnings in months worked during 18 post-training months, by narrow informal education program

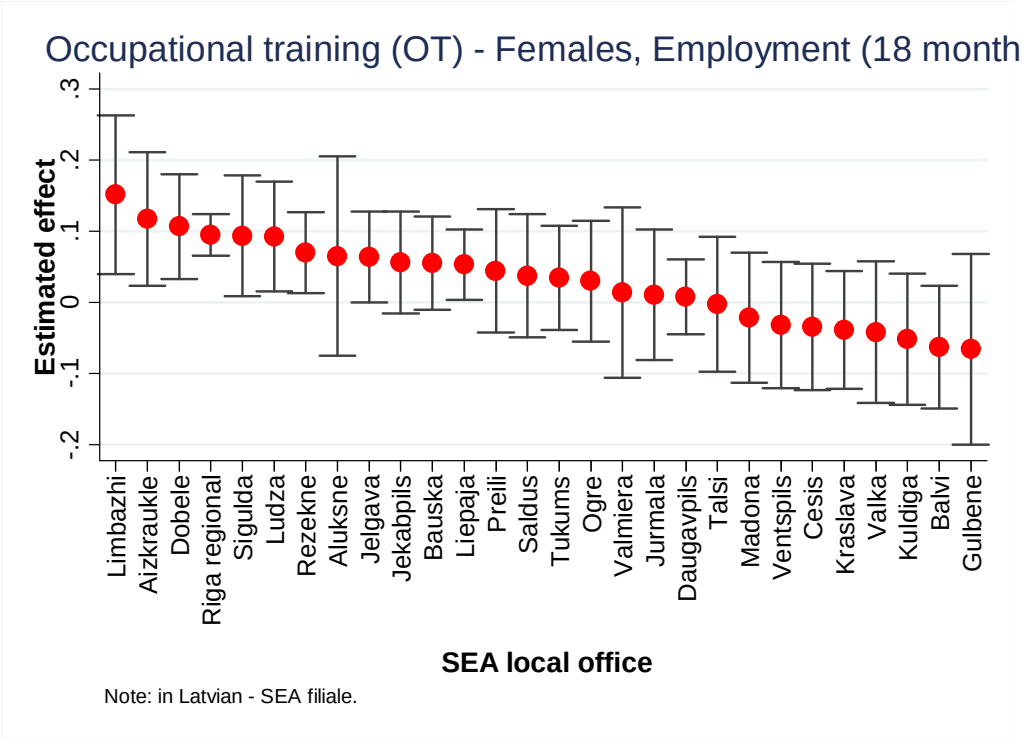


Note: (Gross average earnings / number of months worked) within 18 months.
Trained: after training completion; Others: - after being granted status of unemployed.

Figure B19. Estimated net effects of occupational training on employment rate at 18-months post-training horizon, by gender and SEA local office



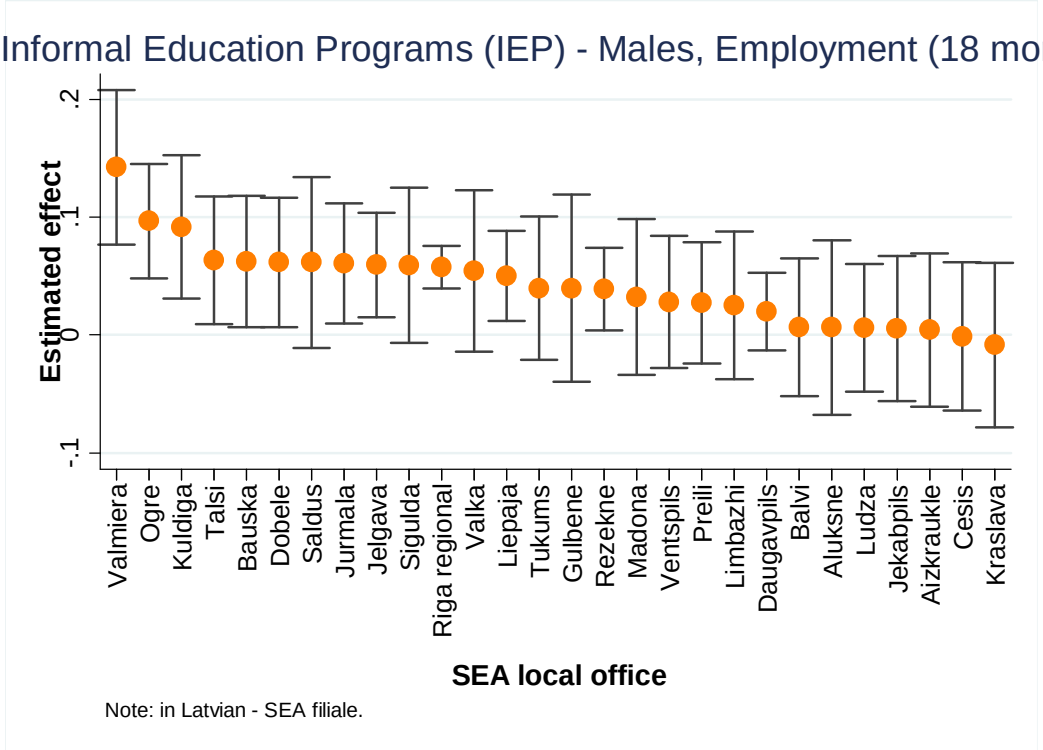
Note: in Latvian - SEA filiale.



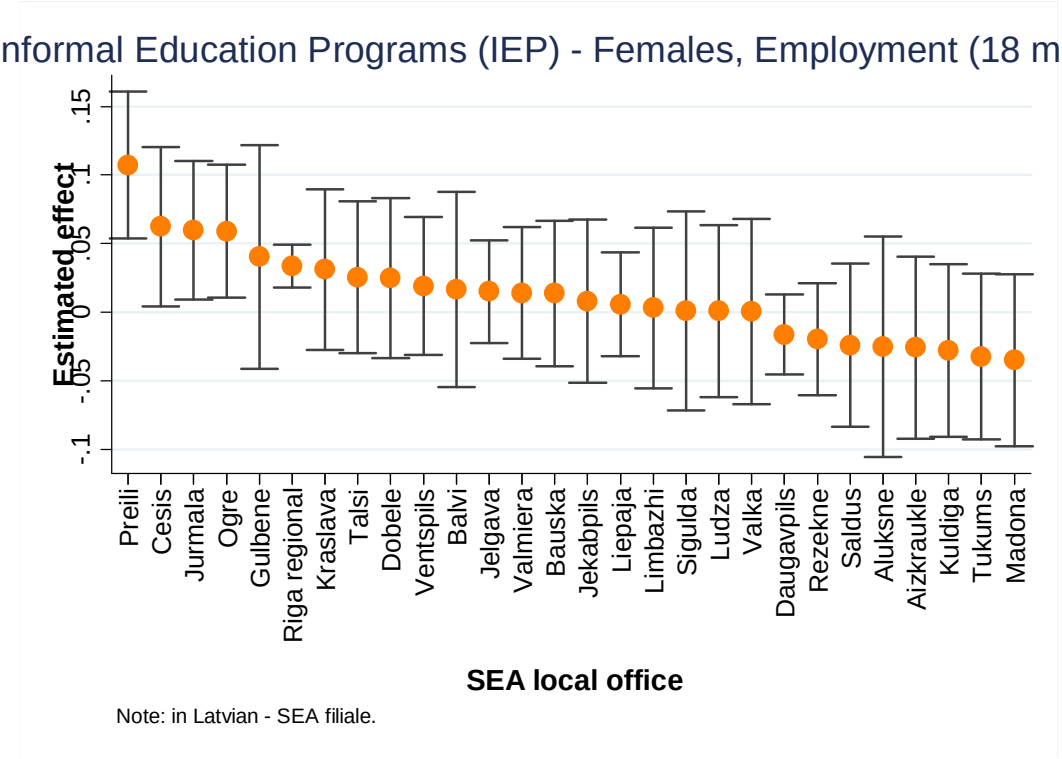
Note: in Latvian - SEA filiale.

Note: Figure B19displays estimated effect with 95 confidence intervals. Intervals for statistically significant effects do not include value of zero.

Figure B20. Estimated net effects of informal education programs on employment rate at 18-months post-training horizon, by gender and SEA local office



Note: in Latvian - SEA filiale.



Note: Figure B20 displays estimated effect with 95 confidence intervals. Intervals for statistically significant effects do not include value of zero.

APPENDIX C

Description of evaluated training programs

Table C1. Groups of programs for evaluation: Occupational training for unemployed

Economic activity, NACE Rev.2	Groups of programs	Number of participants		Occupation code (ISCO 2008/1988)		Coupon method (1 - yes, 0- no)	Program duration, hours	Intake by program, 2008-2012
		2008-2012	2008-2011	Code	New/Old (1 -2008, 0 - 1988)			
Industry and energy (B-E)	**1. Electrician**	809	674	741102	1	1	640	33
				741101	1	1	960	383
				724101	0	0	960	387
				724102	0	0	640	6
	2. Welder	2309	1992	721201	1	1	480	14
				721205	1	1	480	455
				721206	1	1	480	338
				721207	1	1	480	81
				721204	1	1	480	21
				721202	0	0	480	178
				721210	0	0	480	670
				721211	0	0	480	545
				721212	0	0	640	7
	3. Joiner	391	351	752201	1	1	640	97
				752202	1	1	960	16
				742201	0	0	640	217
				742216	0	0	960	61

	4. Assembler	466	420	712602	1	1	640	171
				713604	0	0	640	295
	5. Tailor	414	304	753103	1	1	640	315
				743303	0	0	640	99
	6. Seamstress	402	275	753301	1	1	480	44
				753101	1	1	480	278
				743301	0	0	480	80
	7. Chemistry technician	85	85	311604	1	1	960	12
				311604	0	0	960	60
				311608	1	0	960	13
Construction (F)	**8. Finishing works**	1417	1221	712302	1	1	640	585
				714105	0	0	640	832
	9. Bricklayer	157	148	711201	1	1	480	25
				712206	0	0	480	132
	10. Construction - various	152	149	711502	1	1	640	2
				711203	1	1	480	9
				711501	1	1	960	1
				712102	0	0	960	12
				712208	0	0	480	29
				722303	0	0	480	19
				712102	0	0	640	18
				712202	1	1	480	12
				712203	0	0	480	50

Economic activity, NACE Rev.2	**Groups of programs**	**Number of participants**		**Occupation code (ISCO 2008/1988)**		**Coupon method (1 - yes, 0- no)**	**Program duration, hours**	**Intake by program, 2008-2012**
		2008-2012	**2008-2011**	**Code New/Old**	**(1 -2008, 0 - 1988)**			
Industry, construction and storage (B - H)	**11. Lifting and handling equipment operator**	308	298	834301	1	1	480	30
				833406	0	0	160	68
				833404	0	0	480	210
Repair of motor vehicles (G)	**12. Locksmith**	455	416	722201	1	1	480	5
				723104	1	1	640	122
				723105	0	0	640	263
				723323	0	0	480	65
	13. Car mechanic, Car electrician	291	258	741106	1	1	960	70
				723102	1	1	960	100
				724108	0	0	960	121
Trade, accommo-	**14. Candy-maker**	2444	1988	751210	1	1	480	325
				751206	1	1	640	1600

dation and food services (G, I)				741202	0	0	640	519
	15. Cook	1386	1366	512002	1	1	640	20
				512201	0	0	640	1366
	16. Salesman	1143	1143	522005	0	0	480	1011
				421104	0	0	480	132
	17. Trade commercial employee	259	125	333918	1	1	960	259
	18. Tour consultant	388	210	422103	1	1	960	388
	19. Waiter, bartender	150	130	515114	1	1	960	45
				512301	0	0	960	18
				512304	0	0	640	87
Transportation and storage (H)	**20. Logistics officer**	272	194	333916	1	1	960	272
Information and communication (J)	**21. IT technician**	256	169	351301	1	1	960	205
				351203	1	1	960	51
	22. IT operator	1527	1451	413201	1	1	480	663
				411301	0	0	480	864

Economic activity, NACE Rev.2	Groups of programs	Number of participants		Occupation code (ISCO 2008/1988)		Coupon method (1 - yes, 0- no)	Program duration, hours	Intake by program, 2008-2012
		2008-2012	2008-2011	Code	New/Old (1 -2008, 0 - 1988)			
Financial, insurance, real estate, administrative activities etc. (K-N)	**23. Accountant**	2159	2093	431101	1	1	960	1169
				412101	0	0	960	990
	24. Accounting - improving qualification	621	621	343301	0	0	320	621
	25. Accounting - various	199	109	na		1	160	199
	26. Business activities	1107	1107	131703	0	0	320	1077
				131703	0	0	320	30
	27. Sales organization	289	289	342921	0	0	160	289
	28. Project management	1431	1250	na		1	320	254
				na		1	320	124
				241403	0	0	320	1053
	29. Clerk	796	796	411507	0	0	640	796
	30. Storekeeper	602	444	432103	1	1	960	387
				413103	0	0	960	215
	31. Customer service operator	452	186	422204	1	1	480	452
	32. Real estate management	147	97	515301	1	1	960	59
				na		1	320	76
				512105	0	0	960	8
				na		0	320	4
	33. Secretary	164	164	411501	0	0	960	164
Social work (Q)	**34. Caregiver**	1842	1710	532202	1	1	480	966
				513303	0	0	480	876
	35. Nanny	360	333	531101	1	1	960	360
	36. Social care	298	44	na		1	320	298
Security services (S)	**37. Security**	1693	1513	na		1	160	346
				na		1	160	101
				516926	0	0	160	1246
	38. Labor protection	60	50	na		1	160	12
				na		1	160	10
				na		1	160	38

Economic activity, NACE Rev.2	Groups of programs	Number of participants		Occupation code (ISCO 2008/1988)		Coupon method (1 - yes, 0- no)	Program duration, hours	Intake by program, 2008-2012
		2008-2012	2008-2011	Code	New/Old (1 -2008, 0 - 1988)			
Beauty treatment (S)	**39. Hairdresser**	1248	1248	514102	0	0	640	1248
	40. Nail care	1289	1289	514105	0	0	480	1289
	41. Beauty services - various	155	79	na		1	160	155
Other services (S)	**42. Florist**	791	791	733106	0	0	480	791
Other services	**43. Gardener**	143	126	611301 611311	1 1	1 1	960 640	141 2

Table C2. Groups of programs for evaluation: Employer provided training leading to professional qualification

Groups of employer provided training programs	Number of participants		Occupation code (ISCO 2008/1988)		Intake by program, 2008-2012
	2008-2012	2008-2011	Code	New/Old (1 - 2008, 0 - 1988)	
1. Accounting and finance	**148**	**148**	121105	1	1
			241102	0	1
			241205	1	1
			244103	0	1
			331134	1	1
			331308	1	5
			331309	1	1
			331402	1	10
			343301	0	41
			343402	0	34
			412101	0	2
			412103	0	23
			419002	0	13
			431101	1	7
			431103	1	6
			431107	1	1
2. Project management	**71**	**71**	241403	0	23
			242201	1	2
			242202	1	12
			311926	0	17
			343118	0	17
3. IT	**32**	**32**	213117	0	3
			215207	1	2
			252904	1	4
			311402	0	1
			311402	0	1
			312110	0	1
			312110	0	4
			351201	1	1
			351301	1	3
			351402	1	5
			351403	1	6
			724206	0	1

Groups of employer provided training programs	Number of participants		Occupation code (ISCO 2008/1988)		Intake by program, 2008-2012
	2008-2012	2008-2011	Code	New/Old (1 - 2008, 0 - 1988)	
4. Trade and business services - professionals and associated professionals (ISCO 2, 3)	**190**	**189**	241903	0	7
			243102	1	3
			243104	1	2
			331118	1	3
			331506	1	1
			332205	1	1
			332207	1	7
			332208	1	3
			332301	1	1
			332304	1	1
			333102	1	1
			333905	1	6
			333907	1	2
			333915	1	4
			333918	1	13
			333921	1	1
			333924	1	3
			333929	1	3
			333930	1	1
			333933	1	1
			341135	0	7
			341401	0	2
			341502	0	11
			341505	0	3
			341506	0	2
			341509	0	39
			341509	0	2
			341510	0	12
			341603	0	6
			341604	0	2
			342906	0	1
			342909	0	6
			342921	0	1
			342923	0	1
			342928	0	4
			342929	0	6
			342930	0	12
			343221	1	1
			343231	1	5
			NA	0	3

Groups of employer provided training programs	Number of participants		Occupation code (ISCO 2008/1988)		Intake by program, 2008-2012
	2008-2012	2008-2011	Code	New/Old (1 - 2008, 0 - 1988)	
5. Various professionals and technicians (ISCO 2, 3)	**201**	**201**	213106	1	1
			214526	0	1
			214924	0	1
			216102	1	1
			216201	1	1
			241203	0	1
			241908	0	1
			242220	1	1
			242303	1	1
			242307	1	4
			242314	1	2
			243112	1	2
			244703	0	4
			245108	0	1
			262101	1	3
			264201	1	5
			264205	1	1
			264303	1	2
			265411	1	1
			265413	1	1
			311201	1	5
			311225	1	1
			311402	1	3
			311538	1	2
			311903	0	1
			311913	0	4
			313208	1	11
			314121	1	1
			314208	1	1
			314221	1	1
			321102	0	1
			322203	0	1
			324001	1	2
			331208	1	1
			333101	1	3
			333103	1	2
			334101	1	4
			334104	1	7
			334323	1	2
			341102	1	6
			341203	1	3
			341306	0	1
			341611	0	4
			342103	0	1
			342203	1	4

Groups of employer provided training programs	Number of participants		Occupation code (ISCO 2008/1988)		Intake by program, 2008-2012
	2008-2012	2008-2011	Code	New/Old (1 - 2008, 0 - 1988)	
			342916	0	2
5. Various professionals and technicians (ISCO 2, 3), *continued*			342933	0	1
			343102	1	3
			343111	0	3
			343201	1	4
			343204	0	4
			343217	1	2
			343224	1	2
			343232	1	2
			343927	0	21
			347104	0	9
			347305	0	1
			347505	0	4
			347509	0	6
			347702	0	5
			347805	0	3
			352103	1	2
			413107	0	4
			422302	0	6
			431105	1	3
			432301	1	1
			813201	1	5
			na	0	1
6. Clerks (ISCO 4) and service workers (ISCO 5)	**330**	**329**	322911	0	5
			325905	1	20
			411204	0	6
			411301	0	2
			411501	0	1
			411506	0	5
			411506	0	1
			411507	0	64
			412003	1	5
			413103	0	1
			413108	0	18
			413207	1	1
			421501	0	1
			422103	1	2
			422206	0	11
			422207	1	3
			422501	1	6
			432108	1	30
			432203	1	1
			432204	1	4
			432310	1	7
			432327	1	1

Groups of employer provided training programs	Number of participants		Occupation code (ISCO 2008/1988)		Intake by program, 2008-2012
	2008-2012	2008-2011	Code	New/Old (1 - 2008, 0 - 1988)	
			441302	1	2
			511201	1	3
6. Clerks (ISCO 4) and service workers (ISCO 5), *continued*	**330**	**329**	512123	0	1
			512201	0	4
			512202	0	1
			512301	0	2
			512304	0	19
			512305	0	3
			513303	0	2
			514101	1	5
			514105	1	1
			514105	0	5
			514122	0	4
			514201	0	1
			514206	1	8
			514206	1	1
			514208	1	1
			515117	1	4
			521102	1	2
			522005	0	14
			522008	0	23
			522010	0	1
			522301	1	2
			522305	1	2
			524201	1	3
			524601	1	1
			932203	0	10
			na	0	10
7. Sales and market workers (ISCO 4, 5)	**114**	**113**	325501	1	1
			422204	0	55
			422204	0	5
			512002	1	32
			512122	0	2
			514102	0	4
			514110	0	1
			515114	1	11
			913103	0	3

Groups of employer provided training programs	Number of participants		Occupation code (ISCO 2008/1988)		Intake by program, 2008-2012
	2008-2012	2008-2011	Code	New/Old (1 - 2008, 0 - 1988)	
8. Hospitality and personal care specialists (ISCO 5)	**276**	**276**	512101	0	6
			512102	0	17
			512108	0	5
			512112	0	27
			512119	0	6
			512120	0	1
			512129	0	6
			512402	0	2
			512403	0	6
			513101	0	1
			513105	0	2
			513107	0	34
			515101	1	7
			515106	1	2
			515107	1	66
			515110	1	5
			515111	1	5
			515118	1	1
			515121	1	3
			515122	1	63
			515302	1	1
			515303	1	3
			516304	1	1
			522202	1	1
			532901	1	4
			541401	1	1
9. Agriculture workers (ISCO 6)	**284**	**284**	221305	0	1
			221305	0	2
			611101	0	2
			611105	0	1
			611106	1	3
			611108	1	1
			611204	1	2
			611301	0	17
			611302	1	1
			611302	0	2
			611303	1	2
			611304	0	9
			611304	1	2
			611306	1	3
			611307	0	8
			611309	1	1
			611310	0	15
			611310	1	2

Groups of employer provided training programs	Number of participants 2008-2012	Number of participants 2008-2011	Occupation code (ISCO 2008/1988) Code	Occupation code (ISCO 2008/1988) New/Old (1 - 2008, 0 - 1988)	Intake by program, 2008-2012
			611311	1	2
9. Agriculture workers (ISCO 6), *continued*	**284**	**284**	611312	0	2
			611313	0	3
			611315	0	4
			611401	0	20
			611402	0	25
			612101	0	21
			612102	1	2
			612103	0	2
			612107	0	5
			612108	0	1
			612109	0	2
			612110	0	2
			612116	0	11
			612117	1	1
			612118	0	7
			612119	0	12
			612204	0	2
			612302	0	5
			612402	0	7
			613001	1	1
			613002	1	4
			614108	0	1
			614114	0	9
			614115	0	1
			614202	0	2
			621001	0	6
			621005	1	46
			621020	1	1
			622101	1	1
			622102	1	1
			622202	1	1
10. Manufacture of wood and products - qualified workers (ISCO 7, 8)	**265**	**264**	742201	0	3
			742206	0	1
			742216	0	6
			742218	0	13
			751204	1	6
			752101	1	2
			752102	1	3
			752205	1	4
			752206	1	4
			752209	1	10
			752309	1	2
			752314	1	16
			752315	1	7

			814102	0	1
			814103	0	29
Groups of employer provided training programs	**Number of participants**		**Occupation code (ISCO 2008/1988)**		**Intake by program, 2008-2012**
	2008-2012	**2008-2011**	**Code**	**New/Old (1 - 2008, 0 - 1988)**	
10. Manufacture of wood and products - qualified workers (ISCO 7, 8), *continued*	**265**	**264**	814103	0	1
			814104	0	1
			814105	0	113
			814110	0	13
			817101	0	1
			817202	1	4
			817204	1	1
			817205	1	5
			817213	1	2
			818204	1	3
			826102	0	2
			827301	0	3
			828501	0	9
11. Transport and agriculture technics operators, mechanics etc. (ISCO 7, 8)	**139**	**139**	311508	0	6
			311509	1	10
			721305	1	3
			722201	0	3
			723101	1	15
			723103	0	17
			723103	1	1
			723103	0	5
			723104	1	1
			723105	0	2
			723108	1	1
			723110	1	1
			723302	1	2
			723302	0	1
			723303	1	12
			723304	1	3
			723312	0	1
			723312	0	1
			723313	1	1
			723327	0	16
			724108	0	10
			742219	0	9
			833101	0	2
			833104	0	10
			833104	0	1
			833109	0	4
			833309	0	1

Groups of employer provided training programs	Number of participants		Occupation code (ISCO 2008/1988)		Intake by program, 2008-2012
	2008-2012	2008-2011	Code	New/Old (1 - 2008, 0 - 1988)	
12. Construction and manufacture of metals - qualified workers and operators (ISCO 7, 8)	**282**	**282**	311202	0	5
			311229	1	1
			311513	0	2
			711102	0	4
			711102	1	1
			711201	1	2
			711203	1	3
			711501	1	2
			711501	1	13
			711504	1	2
			712101	0	4
			712102	0	2
			712103	0	5
			712106	0	2
			712202	1	2
			712206	0	6
			712209	0	7
			712401	0	6
			712402	0	38
			712403	1	3
			712404	0	10
			712601	1	1
			713101	0	1
			713101	1	17
			713201	1	2
			713301	0	7
			713601	0	5
			713602	0	4
			713604	0	6
			714105	0	1
			714105	0	2
			721202	0	2
			721210	0	6
			721211	0	2
			721212	1	1
			721302	1	12
			721401	0	1
			722303	1	7
			722306	1	1
			722310	0	7
			723301	1	6
			723304	0	1
			723309	1	11
			723314	1	1
			724101	0	3
			724101	0	1

Groups of employer provided training programs	Number of participants 2008-2012	Number of participants 2008-2011	Occupation code (ISCO 2008/1988) Code	Occupation code (ISCO 2008/1988) New/Old (1 - 2008, 0 - 1988)	Intake by program, 2008-2012
			724104	0	3
12. Construction and manufacture of metals - qualified workers and operators (ISCO 7, 8), *continued*	**282**	**282**	733101	0	2
			734203	0	2
			741101	1	3
			742103	1	1
			753607	1	2
			812202	1	7
			816206	0	1
			817101	0	1
			821102	1	8
			821126	0	1
			821128	0	1
			821902	1	11
			821903	1	1
			828402	0	1
			828403	0	1
			833231	0	1
			na	0	7
13. Food and light industry - qualified workers and operators (ISCO 7, 8)	**235**	**234**	731809	1	4
			731825	1	2
			732202	1	1
			732304	1	3
			733106	0	1
			733106	0	3
			733108	0	4
			734103	0	3
			734111	0	3
			734507	0	1
			741101	0	3
			741103	0	5
			741106	0	1
			741107	0	1
			741113	0	1
			741113	0	4
			741202	0	2
			741209	0	1
			741405	0	16
			743201	0	3
			743202	0	1
			743208	0	10
			743301	0	2
			743309	0	3
			743607	0	1
			743704	0	2
			751202	1	39

			751206	1	6
			751303	1	4
Groups of employer provided training programs	**Number of participants**		**Occupation code (ISCO 2008/1988)**		**Intake by program, 2008-2012**
	2008-2012	**2008-2011**	**Code**	**New/Old (1 - 2008, 0 - 1988)**	
13. Food and light industry - qualified workers and operators (ISCO 7, 8), *continued*	**235**	**234**	753101	1	8
			753103	1	3
			753104	1	2
			753108	1	2
			753202	1	9
			753301	1	2
			753302	1	3
			753307	1	3
			753601	1	3
			815201	1	13
			815301	1	4
			815405	1	6
			816005	1	23
			816301	0	1
			816310	0	2
			825103	0	5
			826110	0	1
			826301	0	4
			827105	0	1
			829005	0	1
			837304	0	6
			na	0	3

Notes: The first digit of the ISCO code (-es) provided in the brackets in the first column indicate the main ISCO category (-ies) that forms according group, however few occupations from the other ISCO categories (not defined in the brackets) may be present in a group if relevant.

Table C3. Groups of programs for evaluation: Informal education programs

Fields of informal education	Groups of informal education programs	Number of participants		Program duration, hours	Intake by program, 2008-2012
		2008-2012	2008-2011		
State language	**1. State language – elementary**	8910	7491	120	6631
				120	2279
	2. State language - intermediate	7745	6054	120	4827
				120	2918
	3. State language – advanced	2901	2425	120	1994
				120	907
Foreign languages	**4. English - without preliminary knowledge**	16006	15184	120	12487
				150	3519
	5. English - with preliminary knowledge, Elementary / Intermediate	8189	7499	150	3266
				150	1341
				150	754
				150	588
				100	1429
				100	419
				100	367
				100	8
				100	11
				100	6
	6. English - Higher Intermediate/ Advanced	323	289	150	265
				100	56
	7. German - without preliminary knowledge	3661	3265	120	2330
				150	1331
	8. German - with preliminary knowledge	1024	927	150	714
				100	310
	9. Other foreign languages	248	151	150	122
				150	88
				150	26
				150	10
				150	2
	10. Russian	441	417	150	369
				150	55
				100	17
Project management	**11. Project management**	4452	4352	120	3410
				120	567
				120	426
				120	27
				150	22

Fields of informal education	Groups of informal education programs	Number of participants 2008-2012	Number of participants 2008-2011	Program duration, hours	Intake by program, 2008-2012
IT	**12. IT**	25896	24300	150	379
				150	94
				120	13693
				120	5234
				120	4913
				120	1534
				120	33
				120	12
				60	4
	13. Software	2095	1901	150	419
				150	180
				150	109
				120	102
				120	32
				120	43
				120	30
				120	1
				120	69
				120	202
				80	2
				60	32
				60	71
				60	21
				60	782
Business and record keeping	**14. Business, record keeping**	2936	2819	150	578
				150	241
				150	141
				150	71
				150	44
				150	27
				150	26
				150	16
				150	10
				150	4
				120	1060
				120	577
				120	78
				120	5
				60	58
Services	**15. Services**	944	944	150	628
				150	172
				150	72
				150	48
				150	12
				150	12

Fields of informal education	Groups of informal education programs	Number of participants 2008-2012	Number of participants 2008-2011	Program duration, hours	Intake by program, 2008-2012
Car and other vehicle drivers	**16. Car drivers**	4103	4103	150	363
				120	3740
	17. Bus and truck drivers	9403	8650	120	5258
				100	473
				80-85	1589
				70-75	1844
				56-59	202
				41-42	37
	18. Tractor, forklift truck and other vehicle drivers	4547	3946	204-234	31
				197	48
				182	144
				172-173	84
				160	156
				157-158	690
				150	1647
				145	868
				120-127	702
				110	85
				95	16
				70	76

THE WORLD BANK GROUP

Distribution of Health Subsidies under the Emergency Social Safety Net and Their Impact on Unemployed

Charles C. Griffin

Irina Mozhaeva

2013

Tables

Figures

CURRENCY EQUIVALENTS

Exchange Rate Effective as of December 31, 2013

EUR 1 = 0.703 Latvian Lats (LVL)

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ESSN	Emergency Social Safety Net
EUR	Euro
HB	Health benefits under the Emergency Social Safety Net
MOH	Ministry of Health
NHS	National Health Service
LI	Low income
LVL	Latvian Lats
SSIA	State Social Insurance Agency
SOPA	Social assistance database

Contents

I. A Review of the Distribution of Health Subsidies under the Emergency Social Safety Net and Recommendations for Design Improvements

Introduction

Health subsidies under the Emergency Social Safety Net (*ESSN*) were provided to the poor from October 2009 to December 2012. The introduction of exemption mechanisms from patient charges was the most important safety net measure. Since October 2009, needy persons (with income below LVL 90 per month per one household member) were exempted from all user charges for inpatient and outpatient care as well as for compensated pharmaceuticals. Since February 2010, people with low incomes, between LVL 90 and LVL 120 per one household member per month, were also exempted from all user charges for the mentioned health services; user charges for inpatient and outpatient services (excluding medications) were reduced by 50% for people with income between LVL 120 and LVL 150 (Table 1).

In this paper we use the term "low income" (*LI*) to describe two poverty groups together: (1) persons with income LVL 90-120; and (2) persons with income LVL 120-150 per month per one household member; usually we analyze the LI group in comparison to the needy group (income LVL 90 and below).

From October 2009 to December 2012, 222151 needy and LI persons were provided with the ESSN health benefits (*ESSN HB*), with LVL 46.0 million devoted to these people from the ESSN funds. However, total spending for the health safety net was even greater since some part of the subsidies was ensured using the resources of the state budget subprogram "Treatment". In this report we analyze subsidies provided from the ESSN funds only.

Table 1. ESSN coverage for the poor in 2009-2012

Benefit	October 2009 - December 2012	February 2010 - December 2011
Exemption from co-payment at GP, specialist, hospital, home care, day care for mentally ill patients, "hotel" stays in hospitals*, dental care for children*		
Needy: income < LVL 90	**100%**	
LI: income < LVL 120		**100%**
LI: income < LVL 150		**50%**
Exemption from payment for compensated medications		
Needy: income < LVL 90	**100%**	
LI: income < LVL 120		**100%**
LI: income < LVL 150		**0%**

* The benefit was discontinued in 2012.

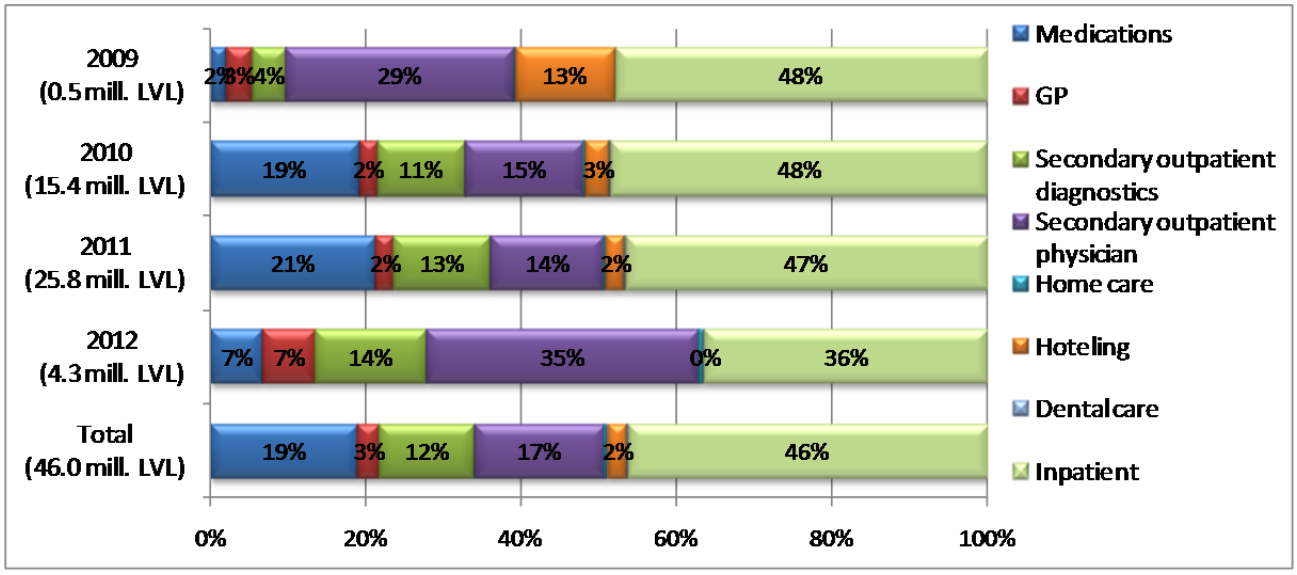
Source: NHS

Initially the ESSN program was planned for the period from October 2009 to December 2011; health subsidies[1] in amount of LVL 41.7 million were devoted to needy and LI persons during this period. The government made a decision to continue the program in 2012 with a more narrow target group, keeping the exemptions for needy persons only (subsidies for LI persons have been discontinued). The scope of health services provided to needy under the safety net was also reduced: dental care for children and hoteling were not subsidized from the ESSN anymore (see Table 1). In 2012, LVL 4.3 million were devoted to health subsidies for needy.

Most of the funds, LVL 41.2 million, were spent within the ESSN in 2010-2011, when the subsidies were provided both for needy and LI; this comprised 4.2% of the total state health care budget in 2010-2011 (HNS, 2012).

Almost a half (46%) of all ESSN resources was devoted to compensation of inpatient care provided to needy and LI patients (Figure 1). In contrast to other health care services covered, which paid only the patient's co-payment, the full amount of inpatient expenses was covered from the ESSN during the period from July 1, 2010 to December 31, 2011. The extra payment in effect was a subsidy to hospitals for inpatient care for the poor, as hospitals more than exhausted their budgets during this period on non-poor patients. In 2010, there was no cap on the number of ESSN patients hospitals could admit, but in 2011 quotas were imposed. If the quota was exceeded, the excess was covered under the hospital's normal contract rather than from the ESSN funds. In 2012, only an inpatient's co-payment was compensated from the ESSN funds.

Figure 1. ESSN subsidies for various types of health services by year, %



Note: The sample used is all ESSN patients.

Source: ESSN database

[1] Here and later on in this report we analyze all the services provided under the ESSN (see Table 1) except for day care for mentally ill patients.

Payments for compensated medications consumed by the needy and LI with income LVL 90-120 (LI with income LVL 120-150 were not eligible for this benefit) comprised 19% of all ESSN expenses and amount to LVL 8.7 million. The share of expenses for secondary outpatient physician services and secondary diagnostic services in total ESSN expenses was 17% and 12% accordingly.

In this report we analyze distribution of the ESSN health subsidies, revealing exclusion and efficiency problems, understanding importance of various health subsidies to different patient groups, as well as assess impact of the ESSN health benefits on employment of those who fell into poverty during the crisis.

In this research we use several administrative databases. First, we use two databases provided by the Ministry of Health and the National Health Service (*NHS*): the ESSN claims data and NHS claims data (excluding ESSN claims) for the ESSN beneficiaries. These databases contain information on the number of claims and expenditure for each patient who received at least one ESSN HB from October 2009 to December 2012; the date of payment from the NHS to the service provider, not the actual date when a service was provided, is available in these two databases.[2] Monthly data on ESSN expenditures for each patient are given by type of service, while the monthly data for NHS claims (other than ESSN) are aggregated and available for each patient for all the services paid by state together. Second, we use the social assistance database (SOPA) that contains information on needy and LI persons who applied for social benefits from municipalities to estimate coverage of the ESSN program (inclusion indicator), to calculate the spell of needy or LI status etc. Finally, we use State Social Insurance Agency (*SSIA*) data to track employment history of the ESSN beneficiaries and to estimate association between the ESSN HB and probability of employment.

1. The ESSN Health Benefit System's Ability to Capture the Poor

90% of all ESSN patients qualified for needy status at least for a short period[3] during November 2009 to December 2012; other ESSN beneficiaries were people with low incomes. However not all of those who qualified for needy or LI status during the period analyzed have used the opportunity to receive health care without out-of-pocket payments.

Needy and LI persons who applied for municipal assistance were registered in the SOPA database. However while definition of a needy person was the same across municipalities, the definition of a LI person varied;[4] moreover some municipalities did not register LI people at all. Information about

[2] The lag between the actual date of service and the date when the payment was executed is usually 1 month for such services as medications, and may be several months for inpatient care.

[3] 90% of all ESSN patients were registered in the SOPA database as needy for at least 1 month during the period observed. The status could change if average income per household member exceeded the LVL 90 level or other requirements were not fulfilled. Therefore many needy persons shifted to the low-income group and back to the needy status during the period under concern.

[4] The definition of a low-income person used within the ESSN HB system was the same in all the municipalities.

needy people in the SOPA database is also incomplete due to some administrative problems, including the fact that only in 2011 all the municipalities in Latvia started using SOPA; however the data are complete enough to conduct the analysis described below.

We use the SOPA database to identify those who qualified for the needy status for at least 1 month during the period from October 2009 to July 2012[5]. Analyzing LI people (alone and together with needy) we use a shorter period—February 2010 to December 2011—since the ESSN HB were available to them since February 2010 and were discontinued in 2012.

According to the obtained results, 51% of those who were registered as needy in SOPA used at least one healthcare service under the ESSN during October 2009 to December 2012 (Table 2). The inclusion rate in the LI group was lower: 40% of those who were registered in SOPA as LI (and did not qualify for needy status during the period considered) used at least one ESSN HB from February 2010 to December 2011. However take-up rates are higher when only adults are analyzed: 59% of needy and 43% of LI persons aged 18 and above have used the ESSN HB at least once. In all **55.5% of all eligible adults used health benefits under the ESSN program**.

Table 2. Share of needy and low-income persons who used at least one health care service under the ESSN

		Needy (Oct.2009-Dec.2012)	Needy and LI (Feb.2010-Dec.2011)	LI (Feb.2010-Dec.2011)
All needy and/or LI	Used at least one ESSN health benefit during the period indicated	50.6%	44.2%	40.3%
	Didn't use ESSN health benefits during the period indicated	49.4%	55.8%	59.7%
Needy and/or LI aged 18 and above	Used at least one ESSN health benefit during the period indicated	59.3%	50.6%	42.9%
	Didn't use ESSN health benefits during the period indicated	40.7%	49.4%	57.1%

Note: The sample comprises all individuals registered as needy or low income in SOPA for at least one month during the according period.

Sources: ESSN database and SOPA database

The difference between estimated coverage among all the eligible persons and adults arises due to rather low inclusion rate among children (see Table 5). During the crisis government made a decision to compensate healthcare expenses from the ESSN funds both for children and adults from needy and LI households; however all the children in Latvia can use health care services paid by state free of charge by default. Use of health care services was registered in the ESSN database and compensated from the ESSN funds only if a person from a needy or LI household showed a doctor a needy or LI person's certificate. Obviously parents didn't always show their certificates when taking their kids to a doctor (they didn't have to pay for these visits in any case); therefore

[5] SOPA data for the most municipalities was obtained for this research in July 2012.

not all the relevant doctor visits within the group of patients aged 17 and below were recorded in the ESSN database.

One should keep in mind that the results provided in the Table 2 might not be very precise; as mentioned above, only in 2011 did all the municipalities start to use the SOPA database. The inclusion rate for the LI group might be more biased due to different definitions of a LI person across municipalities, incomplete registration of LI persons in SOPA etc.

Despite the fact that a large share of residents of Latvia do not get health checks regularly (see Table A4 in the Appendix), a large proportion of ESSN patients had been using health care services since before the ESSN started (Table 3): 87% of all ESSN beneficiaries used health care services paid for by the state at least once during 2008-2009, and 94% used health care services at least once during 2006-2009.[6] This means that 6% of all ESSN patients came to the health care system as 'new' users. The data points to the 'new' patients on average as having neglected their serious health conditions more than those who visited doctors before the ESSN was implemented: 28% of those who hadn't used health care services during 2006-2009 used inpatient care under the ESSN, compared to 20% of the other ESSN patients. As a result mean expenses per one 'new' patient under the ESSN were a bit higher than for the other patients (LVL 223 per one 'new' patient and LVL 212 per one 'old' patient).

Table 3. Health care service usage by ESSN patients before the ESSN Strategy

	Yes	No
Used health care services during 2008-2009	87.2%	12.8%
Used health care services during 2006-2009	94.1%	5.9%

Note: The sample comprises all ESSN patients who were born in 2006 or before.
Source: NHS database.

The benefit system stimulated the use of health care not only among previous non-users, but also among ESSN patients in whole: in 2009, when the economic situation worsened and the patient co-payment for outpatient and inpatient care was increased substantially, the share of those (future) ESSN patients who used at least one health care service during the year decreased to the level of 76%. Following the introduction of the ESSN benefit system, the use by beneficiaries increase by 9 percent points in 2010 and a further by 3 percent points in 2011 (see Table 4).

The health benefit system attracted those who avoided using health care services or couldn't afford them before the ESSN and improved health care usage of this group and the group of ESSN patients in whole.

Table 5 provides inclusion/exclusion analysis by year for needy persons only. In 2010, only 31% of those who according to SOPA data qualified for needy status for at least one month used ESSN HB during the year. However already in 2011 the indicator grew by one third reaching 43%; the system

[6] Here we take into consideration only ESSN patients who were born by 2006.

managed to keep the same level in 2012 even though the funds devoted to the ESSN health subsidies were considerably lower.

One may argue that one month is too short a period to examine the use certain health care services, and one might need to look at a longer time period, for example, to get inpatient care or visit a specialist. Therefore, an analysis was conducted for those who were registered in SOPA as needy for at least three months during the respective year (see Table A1 in the Appendix). The results are almost the same as those provided in the Table 5.

Table 4. Health care service usage by ESSN patients before and after the introduction of the ESSN, 2006-2012

Year	Share
2006	72.5%
2007	77.7%
2008	78.5%
2009	75.7%
2010	84.9%
2011	88.2%
2012	82.5%

Note: The sample covers individuals who used the ESSN at least once over 2009-2012. Children born after 2008 are excluded from the data.[7]

Table 5. Share of needy persons who used at least one ESSN HB in 2010-2012

	2010	2011	2012
Used at least one ESSN health benefit during the period indicated	31.3%	43.1%	42.8%
Didn't use ESSN health benefits during the period indicated	68.7%	56.9%	57.2%
Total number of needy persons	174345	194636	143221

Notes: The sample includes individuals registered as needy in SOPA for at least one month during the respective year. While SOPA data is used for the full calendar years of 2010 and 2011, for 2012 we use SOPA data for December-July only (due to the data were obtained in July 2012). However, the full 2012 year data is used from the ESSN database (given the lag between use of service and payment by the NHS).

Sources: ESSN database and SOPA database

The estimated coverage of the target population by the ESSN HB is not very high compared to the complementary universal health insurance system in France known as "*Couverture maladie universelle complémentaire*" (CMU-C). This means-tested program was introduced in order to remove financial barriers to accessing healthcare for the poorest and it supports 100% of health

[7] The ESSN covered not only adults, but also children from poor households (who actually were already covered by the pre-crisis system). In order to measure the impact of the ESSN before and after its introduction, those born after the introduction of the ESSN are excluded from the sample.

costs, without having to make the advance of costs[8]. In 2009, 80% of the target population was estimated to be covered by the CMU-C (Couffinhal and Franc, 2013). In 2012, the estimated take-up was 85% (CMU Fund, 2012). Those not covered by the program include extremely marginalized groups, single men (generally in good health) who do not perceive a need for complementary cover and households who worry about discrimination (Couffinhal and Franc, 2013).

In contrast to the ESSN, the CMU-C is not a crisis safety net, but was introduced already in 2000. This partly explains the relatively high take-up rate of this complementary universal health cover observed in the later years: most of the eligible households were already well informed about the program. The plan includes some relatively expensive services that were not provided under the ESSN, like eyeglasses, dental prosthetics and hearing aids (CMU Fund's home page), which probably also stimulates the CMU-C take-up rate. One of the problems hindering the CMU-C coverage is reluctance among doctors; health professionals in France have not universally accepted the program. Under the CMU-C, doctors and specialists are required by the government to only charge the basic, official fee. There is evidence that some specialists do not always honor this rule, and some of them ask for additional fees or simply refuse to take on CMU-C patients.

The annual income threshold for entitlement to CMU-C depends on the size of one's household. In 2009, the annual income threshold was EUR 7447 (EUR 621 per month) for single adults in metropolitan France (Guthmuller et al, 2011). In 2011, the monthly income threshold was increased to EUR 648 (Couffinhal and Franc, 2013). The current annual income threshold (valid from July 2013 to July 2014) for CMU-C eligibility is EUR 8593 for single adults (EUR 716 per month). The first individual is weighted as 1, the second 0.5, the third and fourth 0.3, and the fifth and all other individuals 0.4. Eligibility is calculated on 12 months of family income prior to application. Compared to the ESSN HB system, the elderly (i.e. those aged 65 or more) and the disabled are not eligible for the CMU-C plan because the minimum income they receive from the government is higher than the eligibility threshold.

According to the estimations, the ESSN HB take-up during the crisis was considerably lower than the CMU-C take-up. Possibly lack of information on the opportunity to access the ESSN HB was one of the main reasons why coverage of the ESSN HB was not very wide, especially in 2010. Another important reason could be that socioeconomic factors determine an individual's opinion of the necessity of health care (Andersen, 1995), so that even while informed about the ESSN HB system poor people might have faced social barriers and a lack of personal motivation (Mozhaeva, 2011) that could hinder their use of free health care.

According to data on the use by the needy of the ESSN HB program by age group, the health benefit usage indicator was not very high among children; this arises from peculiarities in the compensation system of doctor visits for kids (more explanation is provided above in this section)

[8] It covers 100% of the expenses for health care, unless a doctor applies a tariff that is higher than the official tariff based on the statutory health insurance reimbursement rate.

(see Table 6). A problem arises at the other end of the age scale: despite our expectations **half of needy people of retirement age, whose need for health care services is obviously the greatest, didn't use the ESSN HB**.

Table 6. Share of needy persons who used at least one ESSN HB during the respective year by age groups

Age	2010	2011	2012
Up to 10 years old	14.2%	28.8%	25.4%
11-17 years old	12.7%	25.8%	22.6%
18-29 years old	33.5%	45.6%	45.4%
30-39 years old	37.6%	49.1%	51.3%
40-49 years old	42.1%	57.2%	53.9%
50-59 years old	47.9%	56.8%	58.9%
60-69 years old	44.1%	51.7%	52.1%
70 years and above	41.3%	51.5%	50.5%
Total	**31.3%**	**43.1%**	**42.8%**

Note: The sample comprises those who were registered in SOPA as needy for at least one month during the respective year.
Source: ESSN database and SOPA database.

Table 7. Share of ESSN patients who used any health care service paid by state during 2007, by age groups

Age	Used at least one health care service paid by state during 2007
Up to 10 years old	94.7%
11-17 years old	96.3%
18-29 years old	76.3%
30-39 years old	71.8%
40-49 years old	69.4%
50-59 years old	70.6%
60-69 years old	77.1%
70 years and above	93.4%
Total	78.4%

Note: The sample comprises ESSN patients born before 2008.
Source: NHS database.

We do not have administrative health service usage data for those who have never used the ESSN HB. However, analyzing health service usage indicators for ESSN beneficiaries aged 60 and above in 2007 (before the ESSN and before the crisis), we find that 84% of them used health care services at least once during year 2007 (see Table 7). This indicator exceeds the level observed in all the younger age groups except for those below 18.

According to a population survey conducted in Latvia in 2008, 77% of people aged 60-64 visited at least one medical doctor during the past 12 months; the indicator is much higher than for the younger age groups (see Table A2 in the Appendix). One should note that the doctor visit indicator doesn't include usage of medications, while the ESSN HB usage indicator does.

Taking into account both the national survey data and NHS data, the ESSN HB usage indicator for the group of needy and LI persons aged 60 and above was expected to be higher than it actually turned out to be. Possibly, the information on the opportunity to use health services without out-of-pocket payments was not understood by or made available to some elderly people; some other limitations, for example, mobility problems, as well as social barriers could also hinder usage of HB within the group of elderly persons.

Needy who resided in urban areas show even lower inclusion indicators than those who lived in mixed or rural areas despite the fact that accessibility of health services, especially inpatient care, is better in cities (Table 8). The proportion of needy aged 50 and above in cities was greater than in all other municipality types analyzed (see Table A3 in Appendix), which also indicates that the demand for health services and therefore the HB usage indicator should have been higher in cities. This might mean that the possibility of using health services without out-of-pocket payments in cities was "promoted" less well than in the mixed and rural areas.

Riga and Pieriga are characterized by a comparatively low take-up rate, with 47% and 46% respectively, of needy people residing there used at least one ESSN HB during the whole ESSN activity period (Table 9). The share of those 50 and above was comparatively large in Riga at 25% (among needy), and therefore demand for health care services was expected to be high. However, in the end the take-up rate was not very high in this city. In Latgale, 24% of needy persons registered were 50 years old and above, which is more than in all the other regions analyzed; also take-up among needy in Latgale was greater than in the other regions at 57%.

Table 8. Share of needy persons who used at least one ESSN health benefit during the period of October 2009 to December 2012 by municipality type

	Municipality type				
	City	**Other urban**	**Mixed**	**Rural**	**Total**
Used at least one ESSN HB	46.2%	45.6%	52.4%	49.2%	50.6%
Didn't use ESSN HB	53.8%	54.4%	47.6%	50.8%	49.4%

Note: The sample comprises those who were registered in SOPA as needy for at least one month from October 2009 to July 2012.
Sources: ESSN database and SOPA database.

Table 9. Share of needy persons who used at least one ESSN health benefit during the period of October 2009 to December 2012 by region

	Region						
	Riga city	**Pieriga**	**Vidzeme**	**Zemgale**	**Kurzeme**	**Latgale**	**Total**
Used at least one ESSN HB	46.7%	46.1%	52.1%	48.1%	45.6%	56.7%	50.6%
Didn't use ESSN HB	53.3%	53.9%	47.9%	51.9%	54.4%	43.3%	49.4%

Note: The sample comprises those who were registered in SOPA as needy for at least one month from October 2009 to July 2012.
Source: ESSN database and SOPA database.

2. Distribution of Funds between Needy and Low-Income Patients

ESSN health subsidies in amount of LVL 46.0 million were devoted to needy and LI patients during the period from October 2009 to December 2012. According to data available, 79.6% of this sum was for health subsidies for needy people, the remaining 20.4% was spent to support the LI group (with income below LVL 120 or below LVL 150 per month per one household member).

In 2012, the funding for all exemptions for LI persons was discontinued. Therefore, the LI group had an opportunity to use ESSN HB only from February 2010 to December 2011. The scope of health services provided to the needy under the ESSN was also reduced in 2012: hoteling and dental care for children were removed from the health service list subsidized under the ESSN.

In all 222151 needy and LI persons were provided with ESSN health benefits during the crisis period. A total of 203696 of them were needy (at least for one month), the others never qualified for needy status and were registered as LI persons (below LVL 120 or below LVL 150).

A person who qualified for needy status during some period could shift to LI status due to changes in income level or other parameters and qualify again later for needy therefore changing the status several times during the observation period. This explains why the sum of the poverty groups in the Table 10 exceeds 100% as the same person could be found in two or even three groups during the same year. For example, 88.8% of all patients who benefited from the ESSN in 2010 were registered as needy for some period (in 2010) and used health care services while being needy; some part of them qualified for LI status with income below LVL 120 before or after a needy spell and used the ESSN HB under the LI status as well (during 2010).

In 2010 and 2011, when the ESSN HB were available both for needy and LI persons, 77% of all health subsidies were devoted to the needy group, therefore less than 1/4 of the funds was spent for people with income below LVL 120 and below LVL 150 (Table 11).

In 2010, average ESSN expenses per one LI patient with income below LVL 120 were twice lower than that for needy, while average ESSN expenses per one patient with income below LVL 150 were only 5% lower than expenses per one needy patient (Table 12). In 2011, average expenses per one patient grew in all the three groups and converged, however mean costs for treating needy were still the highest.

Table 10. Number and share of needy and LI persons who used ESSN HB by year

	2009	2010	2011	2012	2013
Needy (below LVL 90)	100.0%	88.8%	87.9%	99.9%	100.0%*
LI with income below LVL 120		23.8%	24.6%	0.1%*	
LI with income below LVL 150		10.9%	12.8%	0.1%*	
Mixed status		0.1%			
Total number of patients	12607	111987	151762	95938	201

Note: The sample comprises ESSN patients.

Table 11. Total ESSN expenses by year and poverty status, LVL

	2009	2010	2011	2012	2013
Needy (below LVL 90)	100.0%	79.1%	76.2%	99.5%	100.0%*
LI with income below LVL 120		11.5%	13.8%	0.3%*	
LI with income below LVL 150		9.3%	10.0%	0.2%*	
Mixed status		0.1%			
Total ESSN expenses	477994	15393328	25830256	4322778	26013

Notes: The sample comprises ESSN patients.

* The data we use reflect the year and month of payment executed by NHS, therefore there is a lag between the date when the service was provided and the date of payment. ESSN HB for LI in 2012 were mostly paid for inpatient services for the patients who started treatment in the end of 2011, but finished in January 2012, or also for the outpatient services that were provided in December 2011, but were paid for in January 2012. The same is for HB for needy in January 2013.

Table 12. Average ESSN expenses per one needy and LI patient in 2010 and 2011, LVL

	2010	2011
Needy (below LVL 90)	122.4	147.6
LI with income below LVL 120	66.6	95.8
LI with income below LVL 150	116.7	133.2

Note: The sample comprises ESSN patients (excluding the mixed poverty group).

Average expenses per one patient with income between LVL 120-150 are high, especially taking into account the two facts. First, this group of patients could not enjoy the same benefits for compensated medications within the ESSN as the needy and LI with income below LVL 120 did, while expenses for medications comprised about 20% of all the ESSN subsidies in 2010 and 2011. Second, user charges were reduced only by 50% for patients with income LVL 120-150, which means that some part of expenses for healthcare was covered by these patients in the form of out-of-pocket payments.

The main explanation for the relatively high expenses per one LI patient with income between LVL 120-150 can be found in the age characteristics of the three poverty groups analyzed (Table 13): 71% of LI patients with income between LVL 120-150 are people in their 60s or older who probably have more serious health problems and whose need for serious and more expensive health services, especially inpatient care, is greater than for younger people. The share of patients aged 60 and above among needy is only 20%. In 2011, mean age of LI patients with income between LVL 120-150 was 65 years, the LI group with income below LVL 120 on average was 13 years younger with a mean age of 52 years, while the average needy person was only 44 years old. Therefore the relatively high per patient costs in the group of persons with income between LVL 120-150 are explained by the fact that pre-retirement age persons and retirees are mostly those who form this group.

After broadening the target group from needy with income below LVL 90 (in 2009) to those with income below LVL 120 and those with income below LVL 150 (in February 2010), the program covered elderly people who fell into poverty. The medical need in this age group is the greatest,

and households with the elderly members in Latvia often face large out-of-pocket payments for health care, especially for medications (Xu et al, 2010). The ESSN program was supporting this group during 2010-2011.

Table 13. Age distribution within the poverty groups, 2010 and 2011

Age	2010			2011		
	Needy	Low income below LVL 120	Low income below LVL 150	Needy	Low income below LVL 120	Low income below LVL 150
Up to 17 years	12.5%	3.1%	0.4%	16.2%	5.3%	1.0%
18-29 years	15.9%	12.5%	2.5%	15.6%	11.3%	3.2%
30-39 years	14.0%	12.3%	3.0%	13.2%	11.3%	3.9%
40-49 years	17.3%	18.4%	6.3%	16.0%	16.5%	7.3%
50-59 years	20.1%	24.2%	13.0%	18.9%	22.6%	14.2%
60-69 years	11.5%	17.6%	36.4%	11.5%	18.6%	32.5%
70 years and above	8.8%	12.0%	38.5%	8.8%	14.4%	37.8%

Note: The sample comprises ESSN patients (excluding the mixed poverty group).

Analysis by type of service

As mentioned above, in all LI patients consumed less than a quarter of all ESSN funds and on average health subsidies per LI person were lower than per needy person; when the situation is analyzed by types of services we find that in some cases expenses for LI patients comprise about one third of all the ESSN funds devoted to each service. Also in some cases expenses per one claim are noticeably greater for LI than for needy patients (see Table A4 in the Appendix).

In 2011, about a third of all claims for home care, hoteling and inpatient services were received from LI patients, and therefore about a third of subsidies for these services were devoted to the LI group. Relatively high demand for these services among LI persons is to a great extent defined by the age characteristics of this group described above (see Table 13).

Expenses per patient were about the same for the needy and LI for home care; in case of hoteling subsidies were twice as low for the LI group with income below LVL 150 due to 50% subsidy. In 2010, subsidies for inpatient care per LI patient with income below LVL 120 were 18% higher than per needy patient, however already in 2011 per patient costs equalized and were about the same for these two groups, while mean expenses per LI patient with income below LVL 150 were by 10% lower.

Outpatient diagnostics is another type of service where expenditures for the LI group were high and comprised 33% of all ESSN subsidies for this service. Expenses per claim for outpatient diagnostics in the group of patients with income below LVL 120 were noticeably greater than for needy; for example, in 2011 expenses per claim for LI patients with income below LVL 120 were

22% greater than for needy, but expenses per claim for LI persons with income below LVL 150 were by 51% greater than for needy. To a large extent this difference is explained by the age composition of the LI group with income LVL 120-150, given that the large share of people in their 60s and above have more serious health problems and therefore needed a wider range of complicated and costly diagnostic tests compared to younger people.

Expenses per claim for outpatient diagnostics for LI people of age 60 and above were significantly greater than expenses per claim for needy people of the same age group (see Table A5 in Appendix). Moreover expenses per claim for LI people were significantly greater than expenses per claim for needy people for almost all the age groups analyzed (except for the two youngest groups). Therefore secondary outpatient diagnostics is the service where usage of the funds probably could have been optimized. In all 12% of all ESSN funds were spent for this service (see Figure 1) and 29% of that was devoted to LI patients. When thinking about optimization these expenses, one should pay more attention to diagnostic procedures implemented for male patients: expenses for diagnostics per claim for male patients were significantly greater than for females (see Table A6 in the Appendix).

Analysis by municipality type

Table 14 provides an analysis of ESSN expenses and claims from needy and LI patients for three types of health services, secondary outpatient diagnostics, home care and inpatient services, by municipality type (full statistics for all the health care services provided under ESSN Strategy are available in the Table A7 in the Appendix). These are the services where the funds devoted to LI groups are noticeably greater than for the needy in at least few municipalities. The five biggest cities of Latvia with population over 50000 people[9] are analyzed separately from the other urban areas; we also keep rural and mixed areas for comparison.

Riga, Jelgava and Liepaja are the three municipalities where a third or more of the ESSN funds devoted to outpatient diagnostics were spent for the group of LI persons. In the case of home care an even greater share, half the funds or more, was spent for the LI group in these three municipalities. In 2011, the mean age of patients living in Liepaja was 48 years; the average patient in Riga was 5 years older, while mean age of patients living in Daugavpils, Jurmala and Jelgava was 43, 44 and 45 years, respectively[10]. Age structure may provide good explanation for relatively high demand for home care as well as outpatient diagnostics in Riga and Liepaja, however some other reasons should be sought for case of Jelgava.

[9] And enough observations (patients) for each service observed

[10] Full age characteristics of the ESSN patients in each municipality are provided in the Table A8 in the Appendix.

Table 14. Share of ESSN expenses and claims from needy patients, expenses per one claim for secondary outpatient diagnostics, home care and inpatient services by municipality

SECONDARY OUTPATIENT DIAGNOSTICS					
	Share of ESSN expenses for needy, %	**Share of number of claims from needy, %**	**Expenses per one claim, LVL**		
			Needy	LI below LVL 120	LI below LVL 150
Riga	67%	72%	11.6	14.0	14.6
Daugavpils	77%	83%	10.3	14.4	16.8
Liepaja	60%	70%	11.2	15.2	20.6
Jelgava	69%	85%	10.7	34.9	16.6
Jurmala	75%	86%	9.6	22.7	15.0
Other urban	76%	82%	10.1	14.0	16.8
Rural or mixed	73%	82%	10.0	14.5	20.7
NA	88%	87%	7.7	6.8	8.4
Total	**71%**	**79%**	**10.5**	**14.7**	**17.3**
HOME CARE					
	Share of ESSN expenses for needy, %	**Share of number of claims from needy, %**	**Expenses per one claim, LVL**		
			Needy	LI below LVL 120	LI below LVL 150
Riga	41%	42%	10.0	11.2	10.1
Daugavpils	14%	13%	11.5	10.2	10.7
Liepaja	47%	46%	10.2	9.5	9.8
Jelgava	53%	54%	10.7	11.0	
Jurmala	96%	95%	10.1	7.5	
Other urban	85%	85%	10.4	9.8	10.0
Rural or mixed	73%	74%	10.0	9.9	10.4
NA	100%	100%	7.6		
Total	**72%**	**72%**	**10.0**	**10.0**	**10.4**
INPATIENT SERVICES					
	Share of ESSN expenses for needy, %	**Share of number of claims from needy, %**	**Expenses per one claim, LVL**		
			Needy	LI below LVL 120	LI below LVL 150
Riga	71%	72%	253.3	305.9	249.5
Daugavpils	83%	87%	203.4	306.4	244.8
Liepaja	61%	70%	201.8	367.2	228.9
Jelgava	80%	83%	209.1	255.8	252.0
Jurmala	80%	83%	197.6	279.6	184.8
Other urban	75%	79%	192.1	269.3	222.8
Rural or mixed	73%	79%	208.1	294.4	258.2
NA	86%	85%	240.5	180.3	241.5
Total	**73%**	**78%**	**212.4**	**295.8**	**250.9**

Note: The sample comprises ESSN patients (except the mixed poverty group).

In Liepaja, LI patients have spent at least a third of the ESSN funds devoted to each health care service available to ESSN needy and LI patients[11], with one exception, GP services. As was mentioned above, the share of LI among all ESSN beneficiaries in Liepaja was the second greatest after Riga (see Table 15). Since the average LI patient was noticeably older that the average needy patient, greater demand for more complicated and expensive health services was observed in the LI group. A large share of the LI group among all patients and greater demand for services within this group can at least partly explain the relatively large share of ESSN funds devoted to LI persons in Liepaja. However the situation in Riga was characterized by even greater share of the LI group and even older patients, while the expense structure was more even. The share of the LI group among all ESSN patients in Jelgava was lower than in the other municipalities analyzed (Table 15), at the same time share of health subsidies devoted to LI was rather big, which might also point to some inefficiency in funds use in this municipality.

Secondary outpatient diagnostics and inpatient care are the two types of services where expenses per claim for LI people exceeded that for needy patients in almost all municipalities analyzed. Expenses per claim were particularly high in Jurmala and Jelgava in the LI group with income LVL 90-120. Liepaja was characterized by rather high expenses per claim for the group of patients with income LVL 120-150.

Table 15. Share of needy and LI patients among all ESSN beneficiaries by municipality

Municipality	Number of patients				Percent		
	Needy	Low income below LVL 120	Low income below LVL 150	Total	Needy	Low income below LVL 120	Low income below LVL 150
Riga	40348	15214	10274	47078	86%	32%	22%
Daugavpils	6870	1185	660	7314	94%	16%	9%
Liepaja	5396	1694	910	6204	87%	27%	15%
Jelgava	4144	647	318	4377	95%	15%	7%
Jurmala	3644	854	317	3854	95%	22%	8%
Other urban	18685	3790	2282	20173	93%	19%	11%
Rural or mixed	123729	29266	10135	132181	94%	22%	8%
NA	880	147	47	970	91%	15%	5%

Note: The sample comprises ESSN patients (except the mixed poverty group).

Note: the sum of needy and the two LI groups does not comprise 100% since the same person could be needy and LI in different periods. Therefore the number of unique patients who were needy at least for a short period is indicated in the table. The same is for the two LI groups.

Expenses per claim for inpatient services in Liepaja for the group of people with income LVL 90-120 were at least 20% higher than in all the other municipalities, at the same time mean costs per

[11] ESSN subsidies for medications were not available to LI persons with income below LVL 150.

patient in the group of patients with income below LVL 150 were lower than in all the other municipalities except for Jurmala.

Some efficiency issues could be analyzed paying special attention to such health services as diagnostic tests and inpatient care. Probably sharing experience and good practice on treating poor patients between municipalities and service providers could have facilitated more efficient use of the ESSN funds.

Relatively high expenses per claim for diagnostic services among patients with incomes below LVL 120 in Jelgava are explained by at least two reasons. First, in Jelgava 62% of LI patients with incomes below LVL 120 who used diagnostic services under the ESSN were at least 50 years old; this is more than in the other municipalities considered (see Table A9 in the Appendix). Mean costs for diagnostics in this age group were higher than for younger patients (see Table A5 in the Appendix), which implies that the relatively high expenses per claim in Jelgava were partly explained by age characteristics of the group of patients considered. Second, the problem of high mean expenses in Jelgava is related to outliers—in some cases payments for diagnostic services within the LI group with income below LVL 120 were particularly high. While the greatest payments for diagnostic procedures were about the same across municipalities analyzed (about LVL 3200-3400 per case), the share of payments above LVL 500 in Jelgava in the poverty group considered was greater than in the other municipalities. The share of large payments was much smaller in Jurmala, but also resulted in higher than average mean expenses per claim.

The issue of high inpatient costs per claim within the LI group with incomes below LVL 120 in Liepaja is also caused by outliers. The number of very high payments that exceeded LVL 3000 in Liepaja is not large—in total 11 cases. These cases increased the mean expense indicator noticeably. Analysis at the case level shows that the patient cases with high payments had serious health problems—most of them used compensated medications and visited doctors intensively both under the ESSN and outside the program (before and after). It is important to note that in Liepaja just as in Riga[12] high expenses arose mainly due to patients who were hospitalized more that once under the ESSN. On the one side, these persons obviously had very serious health problems which implied relatively high treatment costs. On the other side, re-hospitalization (and in several cases multiple re-hospitalizations) may indicate that the existing system is not able to cope with such cases efficiently, which not only results in high mean costs and drives the expenses up, but also puts additional burden on patients' health who face a need for re-hospitalization in a short period of time.[13] Probably this problem should be considered and solved first of all on the national level and then at the provider level.

[12] The number of such outliers in LI group with income below LVL120 in the other municipalities considered is 0 or 1.
[13] Some more information on the re-hospitalization problem under the ESSN is provided in the section 4.

3. Use of Various Health Care Services under the ESSN

When analyzing the intensity of use of various health care services provided under the ESSN Strategy and their use by needy and LI persons as well as for different demographic groups, in this and the next section we pay more attention to the years 2010 and 2011, when both needy and LI patients were eligible for the health benefits and when a full range of health services was financed for needy.[14] Table 16 analyzes the interaction of various health care services as well as the share of needy and LI patients who used according services under the ESSN during 2010-2011. GPs are those whose services were used most intensively by ESSN patients: 72% of needy and LI patients visited GP at least once during 2010-2011 (Table 16).

Table 16. Interaction of the ESSN health services, year 2010-2011

	Medi-cations	GP	Secondary outpatient diagnostics	Secondary outpatient physician	Home care	Hoteling	Dental care	Inpatient	Share of all patients who used according service under the ESSN
Medications		81.4%	62.3%	60.4%	1.1%	7.9%	0.4%	26.6%	**20.0%**
GP	22.4%		54.0%	50.9%	0.5%	5.5%	0.5%	18.4%	**72.4%**
Secondary outpatient diagnostics	23.8%	74.9%		70.6%	0.6%	8.1%	0.2%	21.2%	**52.2%**
Secondary outpatient physician	23.1%	70.7%	70.7%		0.9%	9.4%	0.3%	22.6%	**52.2%**
Home care	45.3%	81.2%	66.5%	100.0%		15.5%	0.2%	54.4%	**0.5%**
Hoteling	31.6%	79.0%	84.5%	98.6%	1.5%		0.4%	33.3%	**5.0%**
Dental care	6.7%	32.3%	11.3%	11.8%	0.1%	2.0%		3.0%	**1.1%**
Inpatient	28.1%	70.3%	58.6%	62.3%	1.3%	8.8%	0.2%		**18.9%**

Note: The sample comprises all patients who used ESSN health benefits during 2010-2011.

Table 17. Use of health care services among population of Latvia in 2011

Health care services	**Share of population, %**
Compensated medications	25.3%
GP	66.8%
Secondary outpatient diagnostics	54.6%
Secondary outpatient physician	47.9%
Inpatient care	11.3%

Note: The sample comprises the total population of Latvia in 2011.

Sources: Author's calculations based on National Health Service and Central Statistical Bureau data.

[14] In 2012, the range of services provided for needy was reduced as dental care and hoteling were not subsidized anymore.

GPs implemented their function of gate keepers rather effectively: about a half of all ESSN patients who visited GPs also visited outpatient specialists and/or implemented diagnostic procedures. Use of outpatient services in the group of ESSN patients was about the same as within the total population (Table 17). One could have expected finding even greater health service usage indicators among the ESSN patients taking into account the fact that poor groups usually have greater medical need.

It should be noted that when analyzing the ESSN data we obtain those who have used at least one health care service under the ESSN during the respective year; at the same time when analyzing population data we get also see those didn't use health care services paid by state during 2011 at all. If we could include only those residents of Latvia who used at least one health care service during 2011, the numbers in the Table 17 would be higher.

We do not find that use of outpatient services under the ESSN was excessive due to the fact that patients had an opportunity to visit doctors without out-of-pocket payments and health care providers had an additional incentive to treat poor patients. Therefore the health subsidy system didn't provoke artificially high healthcare usage indicators among the poor.

The only type of health care service that was used noticeably more often within the needy and LI group compared to average population indicators is inpatient care: 19% of all ESSN patients used inpatient services under the ESSN during 2010-2011 at least once. In total 94503 claims or 425 claims per 1000 ESSN patients were received from October 2009 to December 2012. For comparison, only 170 hospitalization cases per 1000 inhabitants were registered in Latvia in 2010.[15]

In 2011, 23509 unique patients were provided with inpatient care under the ESSN; this comprised 10% of all the inpatients in Latvia that year. A year before the inflow of needy and LI inpatients to hospitals was lower, with 17308 unique patients or 7.5% of all patients who received inpatient care in 2010.

The relatively intensive usage of inpatient services under the ESSN may be explained both by demand and supply. There are at least two main reasons for the rather large demand for inpatient care among the poor. First, not only does poverty have a negative effect on health, but people in poor health have a greater probability of falling into poverty. This meant there was a larger need for serious medical treatment within the group of needy and LI persons. The lower mean education level and age characteristics[16] of the group also contributed to relatively lower health outcomes for the poor. Second, the needy and LI group probably had unmet medical needs for to financial reasons before the ESSN and this was likely more pronounced for relatively expensive health care

[15] Central Statistical Bureau of Latvia (latest data available). www.csb.gov.lv (Accessed on 15.05.2013.)

[16] The mean age of ESSN patients was 46 years, which is about 5 years greater than the mean age of Latvian population.

services, such as inpatient care. Therefore, the introduction of the exemption mechanism for out-of-pocket payments may have released a pent-up demand for inpatient care among the poor.

However, supply could have an even greater effect on inpatient care usage indicators than the demand side. As mentioned above, the full amount of inpatient expenses, not just co-payments, was compensated under the ESSN, and given the narrowing budget constraints faced by hospitals during the crisis, hospitals were interested in stimulating the inflow of needy and LI inpatients in order to balance their budgets.

The impact of the safety net for the needy on ordinary inpatients could be twofold. On the one hand, priority in terms of queues for needy probably could have affected other patients who were waiting for operations for many months; hospitals were interested in providing their services for needy patients putting them in front of the line and delaying care for the others. In 2010, the number of inpatient service providers was twice as small as in 2008[17], therefore labor and other resources of hospitals were limited and they could not meet demand both from needy and ordinary patients in a short period.

On the other hand, even greater problems arose due to insufficient financial resources and quotas for inpatient services defined by state in terms of limited health care budged. If a hospital exceeded its quota, usually it had to cover additional expenses from internal resources. From July 2010 to December 2011, full expenses for treatment of needy patients were compensated from the ESSN funds. Therefore, treating the needy has helped hospitals to balance their budgets and this positively affected their ability to provide more inpatient care to ordinary patients.

Since January 2012, only inpatient co-payments were paid from the ESSN funds and needy persons were not separated from the regular waiting list anymore, therefore the principle of equality was observed for needy and ordinary patients. These changes at least partly explain the reduction in the use of inpatient services observed among needy in 2012.

Tables 18 and 19 allow the analysis of the dynamics of the share of needy and LI patients according to the type of health service used under the ESSN. In 2011, the use of outpatient services by needy and LI persons was greater than a year before. A year later, when the target group was narrowed to the needy only, the safety net priority was maintained, i.e. more intensive use of primary health care, as visits to GPs among needy were kept at the same level as before. However, due to the limited resources and changes described above, access to the other services in 2012 was lower than in 2011.

[17] After the centralization policy was implemented, in 2010 only 40 hospitals remained in Latvia compared to 79 hospitals in 2008.

Table 18. Share of needy patients who used according health service during the year

	Oct.-Dec. 2009	2010	2011	2012
Medications (*needy & LI below LVL 120)	0.7%	20.3%*	21.1%*	6.8%
GP	59.7%	74.5%	76.8%	75.1%
Secondary outpatient diagnostics	31.6%	46.5%	53.4%	41.2%
Secondary outpatient physician	45.7%	51.5%	51.4%	43.8%
Home care	0.1%	0.4%	0.4%	0.2%
Hoteling	4.3%	4.6%	4.0%	0.0%
Dental care	0.0%	0.5%	1.4%	0.0%
Inpatient	15.1%	15.9%	15.9%	12.3%

Note: The sample comprises patients who were registered as needy during respective year and used at least one ESSN HB during that year.

Note: * The database available didn't allow distinguishing the claims for medications received from needy and LI persons with income below LVL120.

Table 19. Share of low-income patients who used according health service during the year

	2010	2011
GP	58.0%	57.8%
Secondary outpatient diagnostics	30.5%	39.1%
Secondary outpatient physician	36.7%	40.2%
Home care	0.2%	0.5%
Hoteling	2.6%	2.9%
Dental care	0.0%	0.3%
Inpatient	18.5%	17.5%

Note: The sample comprises patients who were not registered as needy (LI status only) and who used at least one ESSN HB during respective year.

Health care service usage indicators in the LI group[18] were noticeably lower than among the needy; for example, in 2011, only 58% of LI patients visited GPs, which is by 16% less than in the needy group (Table 19). Taking into account the age structure of the LI group (a large proportion of people aged 50 and above) one would expect to see a greater intensity of doctor visits in this group. Partly, lower service usage indicators can be explained by the fact that people with income of between LVL 120-150 had to pay half of all co-payments themselves. Inpatient care is the only type of service that was used by LI patients more intensively than by needy; the relatively greater need for this service is explained by age characteristics of the LI group described in the previous section.

4. Importance of Various Health Subsidies to Different Groups of Patients

In 2011, both needy and LI persons of all the age groups used a wider scope of health care services than in 2010. This may mean that people became better informed on the opportunity to use various health benefits. In addition, they probably started overcoming various psychological and

[18] Here we use the group of patients who never qualified for the needy status (or never used ESSN HB while qualifying for the status) and who used ESSN HB being in LI status.

social barriers that hindered use of health care services. Tables 20 and 21 show the mean number of services used under the ESSN by needy and LI patients during the respective year by age groups. The literature proposes that other parameters being equal, health services usage is usually the lowest among poor people and rich people, while middle income groups usually use health services more intensively (Brown, 2002; Windmeijer and Santos Silva,1997; Economou et al., 2008); the same pattern is observed in Latvia (Mozhaeva, 2011). Also, without controlling for other demographic characteristics, the share of those who visited any medical doctor within the past 12 months is the lowest in the 1st and 5th income quintiles (see Table A10 in the Appendix). As noted in the first section, the health benefit system attracted previous non-users and improved health care usage of the poor.

In 2012, the range of services available under the ESSN was reduced for needy (hoteling and dental care for children was not subsidized from the ESSN anymore). Also needy patients didn't have priority in terms of queues/waiting list anymore compared to 'ordinary' patients as they did in 2010-2011. This in line with some other reasons on provider level (providers didn't receive additional subsidies for treatment of needy patients anymore) caused reduction in the mean number of services used by needy in 2012 compared to 2011 (Table 20).

Table 20. Mean number of health services used by needy patients during respective year, by age groups

	2009 Nov-Dec	2010	2011	2012
Up to 17 years old	1.5	1.2	1.4	1.1
18-29 years	1.4	1.8	1.9	1.7
30-39 years	1.6	2.0	2.2	1.9
40-49 years	1.6	2.3	2.6	2.1
50-59 years	1.7	2.5	2.6	2.1
60-69 years	1.6	2.5	2.7	2.0
70 years and above	1.3	2.2	2.3	1.6

Notes: The sample comprises needy ESSN patients who used at least one ESSN health benefit during the respective year. The minimum possible mean value is 1.

Table 21. Mean number of health services used by LI patients during respective year, by age groups

	2010	2011
Up to 17 years old	1.1	1.1
18-29 years	1.2	1.3
30-39 years	1.3	1.4
40-49 years	1.4	1.5
50-59 years	1.5	1.6
60-69 years	1.7	1.9
70 years and above	1.5	1.7

Notes: The sample comprises LI ESSN patients who used at least one ESSN health benefit during the respective year. The minimum possible mean value is 1.

While the mean number of services per ESSN patient increased in 2011 compared to 2010, demand for some services declined slightly: there was a decrease in the mean number of claims per patient for outpatient doctor visits, i.e. general and secondary outpatient physician services (Table 22). The mean number of claims per patient for hoteling and inpatient care in 2011 decreased as well. As stated above, the two main problems hindering use of inpatient care—the long waiting list and financial obstacles—were removed or reduced as much as it was possible in 2010 and 2011; moreover, in the second half of 2010 and during 2011, the supply of inpatient care to the poor was stimulated by ensuring full coverage of expenses for inpatient care from the ESSN, not only providing subsidies for a patient's co-payment. While the share of ESSN patients who used inpatient care was only a bit lower in 2011 compared to 2010[19], the re-hospitalization rate decreased significantly: in 2010, 36% of all ESSN patients who used inpatient care were re-hospitalized during the same year, while in 2011 the share of those re-hospitalized during the year was only 26%.

Table 22. Mean number of claims per ESSN patient by age and type of service, 2010 and 2011

2010								
Age groups	Medications	GP	Secondary outpatient diagnostics	Secondary outpatient physician	Home care	Hoteling	Dental care	Inpatient
Up to 17 years old	0.6	1.9	0.2	0.2	0.00	**0.48**	0.052	0.14
18-29 years	0.2	1.6	1.0	1.4	0.04	0.19	0.001	0.23
30-39 years	0.4	1.9	1.4	1.7	0.01	0.35	0	0.31
40-49 years	1.0	2.3	**1.7**	1.9	0.02	**0.55**	0	0.36
50-59 years	**2.1**	**2.9**	**2.0**	**2.1**	0.07	**0.60**	0	**0.42**
60-69 years	**2.5**	**2.8**	**1.8**	1.9	0.10	**0.52**	0	**0.47**
70 years and above	**1.9**	2.3	1.1	1.4	**0.24**	**0.44**	0	**0.47**
MEAN IN 2010	**1.27**	**2.30**	**1.40**	**1.58**	**0.06**	**0.45**	**0.006**	**0.35**
2011								
Age groups	Medications	GP	Secondary outpatient diagnostics	Secondary outpatient physician	Home care	Hoteling	Dental care	Inpatient
Up to 17 years old	0.5	1.9	0.3	0.3	0.00	0.37	0.128	0.09
18-29 years	0.3	1.5	1.1	1.3	0.02	0.17	0.006	0.16
30-39 years	0.7	1.7	1.6	1.7	0.03	0.38	0	0.21
40-49 years	1.4	2.1	**1.9**	1.8	0.03	**0.46**	0	0.24
50-59 years	**2.8**	**2.7**	**2.3**	**2.1**	0.08	**0.55**	0	**0.29**
60-69 years	**3.3**	**2.9**	**2.2**	1.9	0.11	**0.55**	0	**0.34**
70 years and above	**2.5**	2.4	1.4	1.4	**0.25**	**0.47**	0	**0.33**
MEAN IN 2011	**1.64**	**2.17**	**1.57**	**1.51**	**0.07**	**0.42**	**0.020**	**0.23**

Note: The sample comprises all ESSN patients, 2010 and 2011.

[19] However, the number of inpatients among all ESSN patients has grown in absolute terms.

The growth in the mean number of services per ESSN patient is explained by increased demand for diagnostic tests and especially compensated medications. Therefore, a reduction in the share of ESSN subsidies for medications observed in 2012 (see Figure 1) probably signifies unmet demand for these services. At the same time, the share of subsidies for secondary outpatient physician visits in 2012 was more than twice that in 2011, reaching 35% of all subsidies (Figure 1); probably some redistribution of funds in favor of medications could have been more efficient. However, one should take into account that the volume of funds devoted from the state budget to the ESSN in 2012 was six times smaller than in 2011. Therefore, despite the share of outpatient physician visits having increased, in absolute terms the subsidies devoted to this service in 2012 were 2.5 times smaller than a year before.

The demand for compensated medications grew not only among the ESSN patients, but also among total population in Latvia. In 2011, the number of unique patients who were provided with compensated medications in Latvia was 524282, which was 18.5 thousand or 4% greater than a year before and 17% greater than in 2007 (NHS, 2012; HPC, 2011; HCISA, 2008). The number was growing gradually during the crisis (NHS, 2012; HPC, 2010, 2011; HCISA, 2008, 2009). Probably a rather large share of the new users of compensated pharmaceuticals was found among the poor (ESSN patients) and also those with serious health problems are more likely to fall into poverty increasing the size of the target group. Another possible explanation of the increased demand for compensated medications observed under the ESSN is that ESSN patients became better informed about the possibility of using this benefit.

Two age groups, 50-59 and 60-69 year old patients, consumed health services most intensively (Table 22). While the first group (50-59) had greater prospects to get back to the labor market, the second group (60-69) are likely more difficult to activate and a significant part of them might remain out of employment. During the crisis period persons of retirement and pre-retirement age had rather low prospects of employment and therefore low chances to improve the unfavorable financial situation of their households, while their medical needs were the greatest. In 2009, the patient co-payment for outpatient and inpatient services was increased significantly; therefore, providing health benefits to the poor in pre-retirement and retirement age removed the main barrier towards use of health care services in this group.

In spite of the expected greater demand for health care the eldest group (70 years old and above) on average consumed health services under the ESSN less intensively than people aged 60-69 and even than patients aged 40-49 (Table 20 and 22). This may point to the presence of at least two types of problems: poor communication on the possibility of using various health care services without out-of-pocket expenses and problems of accessibility of health care (e.g. travel expenses, queues, limited mobility etc.) for the elderly group. In 2010, 61% of all ESSN patients in their 70s resided in mixed or rural areas, where problems of accessibility to health care services are higher. In 2011, inflows of new needy and LI patients was observed and the composition of ESSN patients

by age and municipality type changed, hence the share of patients aged 70 years and above living in rural or mixed area became smaller at 45%.

Patients in their 50s and 60s were the main consumers of all the health services provided under the ESSN except for home care and inpatient services, where the greater number of claims per patient was observed within the group of patients aged 70 and above. Despite greater hospitalization rates among the oldest group of patients, the mean number of outpatient diagnostic tests per patient in this group in 2011 was a third smaller than, for example, for patients aged 50-59 (Table 22). Wider diagnostic tests for the elderly group probably indicated even greater need for inpatient care in this group and therefore expenses for inpatient services grew in the short run; however, earlier diagnoses would reduce the risk of serious health problems thereby minimizing volume of complicated inpatient cases in the future.

In 2012, when only needy patients were eligible for the ESSN HB, the mean number of services used by the needy decreased dramatically (see Table A11 in the Appendix). The system managed to maintain the same intensity of usage of GP services within the needy group as before, however for all the other services number of claims per patient decreased. Due to new financial and other obstacles described above, the mean number of claims per needy patient for inpatient and secondary outpatient physician services decreased in a year by 25% and 33% respectively, while the indicator for diagnostics shrunk almost twice.

As stated above, a significant increase of demand for compensated medications was observed in 2011 compared to 2010, however already in 2012 we find dramatic reduction of demand for medication (see Table 23). To a large extent this is explained by the fact that people of retirement or pre-retirement age were the main consumers of compensated pharmaceuticals under the ESSN, and most of them became ineligible for the HB in 2012: 75% of all claims for medications within the ESSN were received from people aged 50 and above, and a large part of them were for LI group with income below LVL 120[20]. Discontinuing the exemption mechanism in 2012 for LI persons with income below LVL 120 probably has increased the burden of health care costs for this group.

Keeping the subsidy for compensated medications for the LI group with income below LVL 120 would provide a large benefit for these people at a relatively low cost as:

1. 56% of this group (12.7 thousand patients) were people aged 50 and above. These people obviously have a larger medical need and therefore relatively greater expenses for medical care compared to younger people. Moreover, people of retirement or pre-retirement age face more serious difficulties with getting back to the labor market and therefore have lower chances to improve the poor financial situation of their households.

[20] While LI persons with income below LVL120 were eligible for the 100% benefit for compensated pharmaceuticals in 2010-2011, this type of benefit was not provided for LI persons with income between LVL120-150.

2. The benefit for compensated medications is very important to the poor taking into account the fact that "drug expenditure is the main driver of catastrophic payments"[21] in Latvia, and for example in 2006 drug expenditure was more than 80% of household health spending among the poorest quintile. Furthermore, households with elderly people face catastrophic payments for health care more often than the others (Xu et. al., 2009).
3. Increase in the demand for compensated pharmaceuticals was observed from 2010 to 2011, the need for medications grew among the poor, while demand for most of the other services was stable or even decreased probably reaching some satiety point.
4. Expenses per LI patient with income below LVL 120 were relatively low. Of course, over time we would expect to see expenses increase as those eligible become better informed and take-up expands.
5. Medications are compensated by the state in case of very serious health problems, and inability to buy them may lead to serious complications or even fatal cases.

Keeping the exemption mechanism for compensated medications for the LI group could prevent poor households from going deeper into poverty due to large out-of-pocket expenses for pharmaceuticals and would help them avoid unmet demand for this and other health care services due to financial reasons.

In 2012, a reduction in health care service usage, and especially substantial reduction in usage of compensated pharmaceuticals, was also observed within the group of needy patients despite the fact that they were still eligible for the ESSN HB in 2012 (Table 23). As mentioned above, the registration system may have posed on obstacle and we cannot distinguish claims received from needy persons and from LI patients with income below LVL 120 in case of medications in our database in 2010 and 2011. However we know that in 2012 only the needy were eligible for this type of benefit. In all 6505 unique needy patients submitted claims for compensated medications under the ESSN in 2012. A total of 6190 of them (95%) were eligible for this service in 2011, i.e. they qualified for the needy status or LI status with income below LVL 120. A reduction in number of claims for medications was observed within this group of patients: while in 2011 there were 13.3 claims for compensated medications per one patient, in 2012 there were 2.4 claims only (within this group).

Table 23. Mean number of claims per needy ESSN patient by type of service, 2010-2012

Year	Medi-cations	GP	Secondary outpatient diagnostics	Secondary outpatient physician	Home care	Hoteling	Dental care	Inpatient
2010	1.4*	2.4	1.4	1.6	0.1	0.5	0.01	0.3
2011	1.8*	2.2	1.6	1.6	0.1	0.4	0.02	0.2

[21] Health expenditure is considered to be catastrophic if more than 40% of household's non-subsistence expenditure is spent on health.

2012	0.2	2.2	0.9	1.2	0.0			0.2

Note: The sample comprises needy ESSN patients.

* The database available doesn't allow distinguishing the claims for medications received from needy and LI persons with income below LVL120 in 2010 and 2011.

The share of the funds devoted to compensated medications in 2012 was only 7% of all ESSN health subsidies for needy, which is three times less than in 2011. The new rule for compensation of only the cheapest medication in the category that came into force on January 1, 2012, is one of the reasons explaining this reduction. Another reason, a lower mean number of claims for this service among the needy, is described in detail above. Compensating only the cheapest pharmaceuticals has helped to save the funds, however in line with that some new problems occurred that negatively affected use of the service.

5. The ESSN System's Ability to Target Permanent Poor and People Who Fell into Poverty During the Crisis Due to Unemployment

Using SSIA and ESSN data we analyze whether the ESSN health subsidies covered (1) those who were actively participating in the labor market before and/or during the crisis period and who fell into poverty due to the crisis; or (2) those who experienced unemployment/inactivity for a long period starting before the economic collapse.

We use two different periods in our analysis: for the pre-crisis period, the year 2007; and the crisis period before the ESSN has started its full-fledged activity, 2008-2009 (24 months). During 2007, labor demand was high and unemployment low. Those actively looking for a job could find it without serious problems. When the economic crisis arrived, those who were not employed/inactive during the pre-crisis period had an incentive to join labor market in order to improve worsening financial situation of their households. We use the two periods to capture both groups: those who were willing to work and therefore worked when economy was still growing (2007), and those who got back to the labor market after a long spell of unemployment or inactivity or joined it (mainly young people) when the financial situation of their households worsened due to the crisis.

In this section we analyze ESSN patients who reached the age of 18 and were not older than 56 in 2007, excluding children and people who would be in retirement or of pre-retirement age in 2009.

According to the obtained results, 19% of those who used ESSN HB at least once were unemployed (inactive)[22] during the entire period analyzed, i.e. from 2007 to 2009 (Table 24). The group is quite large. However, almost as many beneficiaries, 18% of all, were employed during the entire period analyzed (during 36 months). In all, 37% of all ESSN patients were employed during 2007 (12 months) with varied success at the labor market during the crisis period (2008-2009). Another 9% of patients worked for 6-11 months in 2007 and at least for 12 months during the crisis period.

[22] Probably part of the group were unofficially employed.

About 24% of all ESSN health subsidies (for those aged 18-56) were spent for long-term unemployed who didn't work (or at least didn't work officially) during 2007-2009 (Table 25). The most unstable in terms of employment were those who were officially employed for only 1-5 months within the three years analyzed, who used 12.5% of the ESSN funds spent.

Table 24. Employment / unemployment of ESSN patients before the crisis (2007) and during the crisis (2008-2009)

Employment / unemployment	%
Employed during entire pre-crisis and crisis period	18.0
Employed during pre-crisis period, employed for 12-23 months in 2008-2009	12.8
Employed during pre-crisis period, employed for 1-11 months in 2008-2009	5.9
Employed during whole pre-crisis period and unemployed during entire crisis period	0.3
Employed for 6-11 months during pre-crisis period and for 12-24 months during 2008-2009	8.8
Employed for 6-11 months during pre-crisis period and for 1-11 months during 2008-2009	6.4
Employed for 6-11 months during pre-crisis period and unemployed during 2008-2009	2.5
Employed for 1-5 months during pre-crisis period and for 12-24 months during 2008-2009	4.9
Employed for 1-5 months during pre-crisis period and for 6-11 months during 2008-2009	2.7
Unemployed during 2007, employed for 12-24 months during 2008-2009	3.0
Unemployed during 2007, employed for 6-11 months during 2008-2009	2.3
Employed for 1-5 months during pre-crisis period and for 1-5 months in 2008-2009 (6-10 months in total)	2.1
Employed for 1-5 months during pre-crisis period and/or for 1-5 months in 2008-2009 (1-5 months in total)	11.3
Unemployed during pre-crisis period, unemployed during 2008-2009	19.1
Total	100.0

Note: The sample comprises ESSN patients who were 18-56 years old in 2007 and who were registered in the SSIA database.

An average long-term unemployed person (those who were unemployed for the entire period from 2007 to 2009) doesn't differ from an average ESSN patient a lot in terms of demographic characteristics (age, gender and municipality type). Long-term unemployed ESSN patients were somewhat less likely to live in Riga and more often lived in a mixed or rural area, where job prospects were not as good as in the urban area (see Table A12 in the Appendix). The main distinctive feature of this group is relatively poor health: the long-term unemployed more often than the others were officially disabled. About 42% of them used inpatient services, home care, hoteling or compensated medications (under the ESSN), which signals their poor health; the share of those who used at least one of these services among the rest of ESSN patients is twice as small at 21%. The health safety net then was accessed by young adults and middle aged people who faced serious obstacles to joining the labor market or returning to it after a long unemployment spell, at least partly due to their poor health.

The ESSN HB system supported the long-term unemployed who fell into poverty during the crisis; many of these returned to work as economic conditions improved. Of the long-term unemployed

who didn't work (or didn't work officially) during 2007-2009 and used the ESSN, 30% were officially employed in 2012 (from January to August[23]) for at least one month. Of these long-term unemployed, 86.5% used the ESSN HB in 2011 or earlier, the remainder used ESSN HB in 2012.[24] Among the long-term unemployed who were employed for at least one month in 2012, 31% were 50-61 years old, the age group that is difficult to activate; and 22% of them were below 30 (in 2012). The health safety net therefore helped needy and LI persons to improve/maintain their health status and also allowed them to avoid falling deeper into poverty due to large out-of-pocket payments for health care needs. Without the safety net, in the face of a health shock, impaired health and deeper impoverishment may have reduced their chances to return to the labor market.

Table 25. Share of ESSN health subsidies spent by various employment groups

Employment / unemployment	**ESSN subsidies**	**%**
Employed during entire pre-crisis and crisis period	3518570	13.4
Employed during pre-crisis period, employed for 12-23 months in 2008-2009	3168349	12.0
Employed during pre-crisis period, employed for 1-11 months in 2008-2009	1715435	6.5
Employed during whole pre-crisis period and unemployed during entire crisis period	66258	0.3
Employed for 6-11 months during pre-crisis period and for 12-24 months during 2008-2009	2031668	7.7
Employed for 6-11 months during pre-crisis period and for 1-11 months during 2008-2009	1794328	6.8
Employed for 6-11 months during pre-crisis period and UE during 2008-2009	763221	2.9
Employed for 1-5 months during pre-crisis period and for 12-24 months during 2008-2009	1155826	4.4
Employed for 1-5 months during pre-crisis period and for 6-11 months during 2008-2009	711984	2.7
Unemployed during 2007, employed for 12-24 months during 2008-2009	704885	2.7
Unemployed during 2007, employed for 6-11 months during 2008-2009	570939	2.2
Employed for 1-5 months during pre-crisis period and for 1-5 months in 2008-2009 (6-10 months in total)	545444	2.1
Employed for 1-5 months during pre-crisis period and/or for 1-5 months in 2008-2009 (1-5 months in total)	3297032	12.5
Unemployed during pre-crisis period, unemployed during 2008-2009	6308436	23.9
Total	**25771056**	100.0

Note: The sample comprises ESSN patients who were 18-56 years old in 2007 and who were registered in the VSAA database.

[23] Latest data on employment used for August 2012.

[24] As was mentioned above, we do not have the date when a service was actually provided, but rather the date of payment from HNS to a provider. There is a gap between the date of service and the date of payment can be several months. Therefore, one cannot define precisely whether the HB in 2012 was received before one became employed or after.

6. Conclusions and Recommendations

1. **Inclusion and exclusion.** Of all adults who qualified for needy or LI status, 55.5% used at least one health care service under the ESSN program from October 2009 to December 2012. The ESSN improved health seeking behavior of the poor patients by attracting non-users to the system and increasing the regularity of doctor visits for the rest. However, the inclusion rate was not very high among the elderly persons: half of eligible people of retirement age didn't use ESSN HB. Possibly this was due to a lack of information on the opportunity to use the ESSN HB. Improving the approach to informing[25] needy and LI persons about the ESSN HB and the possibility to use health care services without out-of-pocket payments may have facilitated better coverage. Differentiating communication strategies for younger and more elderly potential beneficiaries may have been one way to improve take-up of older groups.

2. **Was usage of health care services excessive under the ESSN?** Availability of the free health care and the inflow of additional funds to health service providers did not cause disproportionately high health care usage indicators among the poor. GPs were rather efficient at implementing their function of gate keepers. As a result, the use of outpatient services by the group of ESSN patients was about the same as for the total population. Taking into account the unfavorable socioeconomic characteristics of the ESSN patients, one would have expected to find higher health service usage indicators for this group. The only service that was used more intensively by the poor (compared to the total population) was inpatient care, which can be explained by various reasons, including the fact that the two main obstacles for the use of this service were eliminated under the ESSN (high out-of-pocket payments and long waiting list) and the incentive of hospitals to attract more inpatients in order to cope with their budget constraints.

3. **Targeting the needy.** Most of the ESSN funds were devoted to the needy: only a quarter of all ESSN health subsidies were spent for LI patients, and on average one LI patient was less costly for the system than one needy patient. By expanding the target group from needy to LI persons in February 2010, the system covered elderly people who fell into poverty during the crisis. In 2012, all the ESSN health benefits were discontinued except for the needy, making mainly individuals of pre-retirement and retirement age ineligible for the ESSN subsidies. In 2012, these LI pre-retirement individuals who were unemployed continued to face a difficult labor market situation.

4. **Distribution of the ESSN subsidies in 2012.** Initially, the ESSN program was planned to last from October 2009 to December 2011. However, the government made a decision to extend the

[25] Probably representatives of municipalities who were in touch with needy and LI should have been more proactive in providing information on the ESSN HB to them.

ESSN in 2012 to keep protection for the needy group, while discontinuing all HB for LI persons. As a result, the distribution of the subsidies between various types of health services differed compared to 2010 and 2011.

Certain general health care reforms (e.g. changes in rules of subsidizing compensated medications), as well as changes related specifically to the provision of health services to the needy (e.g. waiting list problems that were not topical for needy in 2010-2011, removing full compensation for inpatient care for the poor patients and leaving patient's co-payment only etc.) have caused changes in demand for and supply of services and therefore affected the distribution of the ESSN funds among various types of health services. While the increase in demand for compensated pharmaceuticals in 2011 compared to 2010 was the highest among all services[26], in 2012 the share of subsidies devoted to medications was three times smaller and the mean usage indicator (per patient) was considerably lower than in 2011. Therefore unmet demand for pharmaceuticals has probably increased in 2012. Since people aged 50 and above are the main consumers of the service, this group has obviously suffered the most from the unmet need for subsidized medications, especially taking into account that most of them are in the LI group that was no longer eligible for the ESSN HB in 2012.

The LI group included a large share of elderly people, and keeping the exemption mechanism for LI persons with income below LVL120[27] for compensated medications after 2011 could be a relatively cheap and efficient way to protect this vulnerable group. This would help prevent these households from going deeper into poverty taking given that the poorest quintile of Latvian households, and particularly households with members 65 years old and above, are likely to encounter catastrophic expenditure for drugs.

The demand for GP and secondary outpatient physician services decreased in 2011. In 2012, share of subsidies for these services was more than twice greater than before. Probably some redistribution of the funds could have been considered.

5. **ESSN targeting of the permanent poor and those who fell into poverty during the crisis.** According to SSIA data, the major share of ESSN beneficiaries aged 18-56 were employed during the pre-crisis and/or crisis period analyzed (2007-2009) and fell into poverty due to crisis. From this age group, 18% of ESSN beneficiaries were employed during the entire period from 2007 to 2009. However about as many, 19% of ESSN beneficiaries, were unemployed or inactive during this period (i.e. for at least 36 months). Therefore, the system also covered the permanent poor who faced serious problems in returning or joining the labor market. On average this group was characterized by relatively poor health: individuals in this group were

[26] The growth of demand for compensated pharmaceuticals was observed not only among ESSN patients, but also among the general population of Latvia.

[27] LI persons with income below LVL 150 were not eligible for this health benefit under the ESSN.

more likely to be officially disabled than in other groups and also to more frequently use more expensive[28] health care services under the ESSN. Therefore ensuring free health care for them provided a large benefit for this group. It is important to note that after a very long unemployment/ inactivity spell (at least three years) at least a third returned to the labor market in 2011 or 2012.

[28] Inpatient care, compensated medications, home care and hoteling.

II. Impact of the ESSN Health Benefits on Unemployed

1. Introduction

The purpose of the analysis provided in this section is to shed light on relationship between use of health benefits under the ESSN and employment within the group of persons who were needy during the crisis period. The principle research question addressed in this section is "How the ESSN health benefits available to the unemployed who fell into poverty affect their labor supply decisions?" These decisions interact with a person's socio-demographic characteristics such as education and job experience, in determining labor market outcomes. They also interact with factors affecting the demand for labor, including cyclical economic conditions.

On the one hand, health benefits provided under the ESSN may have a positive impact on the labor supply of the poor, because impaired health may be one of the reasons they drop out of the labor force and it may lower their prospects to find a job. On the other hand, there is a popular view or hypothesis that the benefits system overall and free health care in particular reduces an individual's incentives to return to the labor market.

In this analysis, we focus on needy persons who were eligible for a range of benefits, and the ESSN HB available to them is treated as one among the array of benefits the poor unemployed persons can tap, including social assistance benefits, unemployment insurance etc. As mentioned in the previous section, while the full set of the ESSN HB were available for the needy, only 59% of needy adults eligible for these benefits actually used them. Estimating the association between use of the ESSN HB and employment within the group of persons who were needy during the crisis period is the aim of this part of the study on the ESSN health benefit system in Latvia.

2. Data and Methodology

Data

We merge together the data obtained from the three different administrative databases to estimate impact of the ESSN health benefits on probability of employment of persons who were unemployed[29] and qualified for needy status during the crisis. First, we exploit SOPA municipal social assistance administration information system data to identify people who were needy during the period from October 2009 to December 2011. Using the SSIA data we analyze the employment history of these persons from January 2005 to August 2012. Finally, the data on ESSN claims provided by the National Health Service allow us to see whether a needy person used any ESSN HB from October 2009 to December 2011.

[29] Not officially employed according to SSIA data.

The latest available observation period in the SSIA database at our disposal is August 2012, therefore we estimate probability of employment of the needy persons[30] in August 2012. The registered unemployment rate in the third quarter of year 2012 was 13.8%[31] (for the age group 15-64) which was the lowest level since 2008 (Central Statistical Bureau of Latvia data).

The ESSN database that we use contains information on HB provided to the needy until the end of 2012, and but for this analysis we had to restrict our observation period. We identify the period of usage of ESSN HB from October 2009 to December 2011 (not July 2012) due to the following reasons. In 2010 and 2011, the ESSN health benefits were provided in full amount and were used by needy patients intensively. In 2012, both the ESSN budget and the number of needy persons who used health services under the ESSN have decreased dramatically; intensity of usage of the health benefits has also decreased due to the reasons stated in the first part of this report. Using only half of the year for analysis (for example from January to July) may provide biased results since the ESSN database at our disposal doesn't contain an actual date of access of the health service, but rather the month of payment made by HNS to the provider of the treatment. The lag between the date when the service was actually provided and the date of payment may be one to several months long. Therefore, using the ESSN data from October 2009 (when the ESSN HB system was started) to December 2011 allows us to get results that (1) are not affected by the number of factors that hindered use of HB in 2012 and (2) minimize possible errors due to the lag problem described.

Moreover, we do not expect to find an immediate positive effect of use of health services under the ESSN for one's prospects of employment (through improved health). Therefore a gap between the period when health benefits were used and the moment when one's employment/unemployment is analyzed would be necessary. According to the approach defined we have a minimum seven months gap (from January 2012 to July 2012).

We use the same period (October 2009 to December 2011) in the SOPA database to identify and select those who were eligible for the ESSN HB during the period concerned, i.e. needy persons. In this analysis we do not take into account the LI group since definition of a LI person was different across municipalities, and additionally some municipalities did not register LI at all (in SOPA); therefore including LI persons into analysis would provide distorted results.

We estimate the probability of employment of persons who were registered as needy in the SOPA database from October 2009 to December 2011 for at least three months. We set a minimum three-month period of needy status condition to make sure that a person had enough time to use a health service under the ESSN. While for ordinary patients implementing some diagnostic procedures and specially receiving inpatient services may ask more than half a year due to long

[30] Those who were registered as needy from October 2009 to December 2011.

[31] For example, in 2009 during the same period of the year the registered unemployment rate was 18.6%, in 2011 – 15.3%.

waiting lists, the waiting list problem was relaxed to a possible extent for needy in 2010 and 2011; therefore we set our restriction at the 3 months margin.

In our analysis we drop persons who were below 18 and above 64 in 2012. Therefore, we obtain the group of people in working age. We also exclude from the analysis those who were retired or on maternity leave in August 2012. Omitting observations with missing values for some independent variables and excluding from the analysis those residing outside Latvia, we obtain a a group of 92496 individuals.

Methodology

The relationship between the explanatory variables and the probability of employment is estimated using a binary probit regression model. The marginal effects of each explanatory variable are evaluated at sample means, and in large samples the sample mean approximates the overall mean of the marginal effects (Greene, 2003).

The available data does not allow us to distinguish those who were actively seeking work from the inactive not looking for a job, therefore we cannot identify precisely the labor force in our data. We use a more objective indicator, actual employment status, as a dependent variable. Excluding from the analysis those who were retired or on a maternity leave in August 2012, we design a binary variable where 1 indicates that a person was employed, and 0 stands for those who were not employed in August 2012.

We create binary indicators to identify use of various ESSN HBs during the period from October 2009 to December 2011. Our measure equals 0 if a person didn't use the according health service under the ESSN during the reference period and 1 if he or she did. The list of health care services examined includes all the services available to the needy by the end of 2011, except dental care that was provided to children only and day care for mentally ill.

In our main model we use two combined health service binary variables; we divide health care services provided under the ESSN into two groups: (1) "light" services, i.e. GP, secondary outpatient physician services and secondary outpatient diagnostics, and (2) "heavy" services, i.e. inpatient care, home care, compensated medications and hoteling. Use of "heavy" services is related to serious health problems, which negatively affect one's prospects at the labor market. We control for use of these services in our model and treat it as an indicator (proxy) of poor health.

In contrast to GP and outpatient physician services which are optional, the use of "heavy" health care services is induced by serious health problems and this makes them mandatory; therefore we expect that needy people who never used any ESSN HB before and who faced necessity for a "heavy" health service would use the chance to get this service without out-of-pocket payments (if informed about the opportunity), especially taking into account that as distinct from "ordinary" patients, needy people didn't face the problem of very long waiting lists.

Other explanatory variables included into the model are a person's gender, age, place of residence, marital status, household size, number of kids, ethnicity and citizenship, education and type of the last employer before the unemployment spell. The type of the last employer variable is categorical and one of its categories covers the group of those who were not employed from 2005 to 2009. Therefore the problem of those without job experience or in long-term unemployed is controlled for in the model.

More details on the definitions and composition of the variables used are reported in Table A13 (see in the Appendix).

3. Results

The effect of the "light" health services on employment is the main interest of this research, since results of use of this type of services would indicate whether or not free health care reduces one's incentives to work. We find that other parameters equal, the **use of the "light" health care services under the ESSN is positively related to employment of those who fell into poverty during the crisis**. Table 26 presents results for a binary probit model estimating the association between the probability of being employed in August 2012 and various socioeconomic factors, including the use of health benefits under the ESSN. The sample is all Latvians who were needy for at least 3 months during the period from October 2009 to December 2011

Controlling for other individual characteristics, using "light" health services under the ESSN by December 2011 is associated with a 0.8% increase in the probability of being employed. The effect is not very strong, given that the mean probability of employment in August 2012 in this group was 34.5%. At the same time, **the results obtained would suggest that the availability of free health care did not reduce the incentives to work among needy persons.**

As expected, variables for all the "heavy" services—inpatient care, home care, hoteling and compensated pharmaceuticals—that point to poor health status have negative (and significant) effects on employment. Individuals with poorer health are less able to work, and Stewart (2001) finds that in Canada individuals with impaired health have significantly longer unemployment spells. Of course, there is a reverse causality issue: there is sufficient evidence to suggest that employment is beneficial to health, while unemployment has negative impact on health and increases mortality (Beland et.al., 2002; Gallo et al 2000, 2006; Martikainen, 1990).

Table 26. Association between employment and socioeconomic factors and use of health care services under the ESSN[32]

		Probability of employment	
		dP/dX	Sig.
Female (reference category: Male)		4.0%	0.000
Age (reference category: 18-24 years)	25-34	-4.9%	0.000
	35-44	-4.0%	0.000
	45-54	-6.3%	0.000
	55-64	-8.8%	0.000
Place of residence - urban / rural (ref. cat.: City)	Other urban	1.5%	0.148
	Mixed	-2.4%	0.000
	Rural	-0.8%	0.235
Place of residence - region (ref. cat.: Riga city)	Pieriga	2.3%	0.000
	Vidzeme	-3.2%	0.000
	Zemgale	-1.4%	0.019
	Kurzeme	-0.1%	0.836
	Latgale	-7.2%	0.000
Marital status (ref. cat.: Single)	Married	4.4%	0.000
	Divorced	1.7%	0.010
	Widowed	-7.1%	0.000
Household size (ref. cat.: 1 person)	2	5.1%	0.000
	3	8.0%	0.000
	4	12.6%	0.000
	5 and more	13.0%	0.000
Number of kids 16 y.o. and less in the HH (ref. cat.: no kids)	1	0.0%	0.978
	2-3	-4.1%	0.000
	4 and more	-10.4%	0.000
Ethnicity and citizenship (ref. cat.: Latvians, LV citizens)	Non-Latvians, LV citizens	-1.4%	0.000
	Noncitizens, FSU countries' nationals	-0.7%	0.124
	Other	-2.7%	0.388
Education (ref. cat.: Basic)	Secondary	4.4%	0.000
	Vocational	5.7%	0.000
	Prof. secondary	8.0%	0.000
	Prof. higher	2.4%	0.253
	Higher	3.7%	0.320
	Not known	8.8%	0.000
Last employer before the unemployment spell (ref. cat.: Private company)	Farm / Fishery	-3.2%	0.005
	Individual or family enterprise	-0.7%	0.643
	Public institution	-5.8%	0.000
	Self employed	-2.4%	0.452
	Other	1.1%	0.589
	Unknown	0.3%	0.684
	Wasn't employed during 2005-2009	-22.3%	0.000
Health services used under the ESSN	**'Light' health services**	**0.8%**	**0.020**
	'Heavy' health services	**-6.1%**	**0.000**

Note: The sample comprises 18-64 years old persons who were registered as needy in the SOPA database for at least 3 months over October 2009–December 2011.

[32] Authors' calculations using administrative data provided by the Ministry of Welfare, the State Social Insurance Agency and the National Health Service of the Republic of Latvia

Job loss can cause adverse mental health outcomes including depression and impaired psychosocial functioning; in turn poor mental health, through both biological and behavioral pathways, negatively affects physical health. A two year longitudinal study that followed individuals after involuntary job loss indicated that job loss was associated with depression and reduction in personal control and transformed into health problems (Price et. al., 2002). Depression and impaired health resulting from job loss, especially during the crisis period when psychological pressure was high, can reduce one's ability to find a job. Booker and Sacker (2012) find that those who make several attempts to re-enter the labor market following economic inactivity become more distressed with each try, therefore poor mental and physical health can become an aggravating problem and lead to a downward spiral that may be difficult to escape.

This means that timely medical assistance is critical for the unemployed, especially the long-term unemployed, and the introduction of exemption mechanisms from user charges for health care services was a very important element of the ESSN HB system.

The need for "heavy" services was large for the group considered: 19% of the needy persons analyzed used at least one "heavy" health service. However, use of "light" health services was much more intensive: 54% of the group have used at least one "light" health service during the period considered.

The effect of the "light" health services on employment is the main interest of this research, since results of use of this type of services would indicate whether or not free health care reduces one's incentives to work. We find that other parameters equal, the **use of the "light" health care services under the ESSN is positively related to employment of those who fell into poverty during the crisis**. Controlling for other individual characteristics, using "light" health services provided under the ESSN increases the probability of being employed by 0.8%. The effect is not very strong given that the mean probability of employment in August 2012 in this group was 34.5%. At the same time, **the results obtained suggest that the availability of free health care did not reduce the incentives for needy people to work.**

Table A14 (see Appendix) provides disaggregated results for various health care services provided under the ESSN. We include all the "light" health services into the model one by one in line with the "heavy" health care services. The results propose that use of all the "light" health care services, i.e. GP, secondary outpatient physician services as well as outpatient diagnostic services, is positively associated with employment of needy persons (other factors controlled).

According to the results, use of GP and secondary outpatient physician services has only minor positive effect on probability of employment (0.6%), while use of outpatient diagnostic services provides noticeably stronger effect and increases the probability of employment by 2% (see Table A14 in the Appendix).

As expected, variables for all the “heavy” services—inpatient care, home care, hoteling and compensated pharmaceuticals—that point to poor health status have negative (and significant) effects on employment.

4. Conclusions

We find that after taking into account other factors, the use of ”light” health care services, i.e. GP, secondary outpatient physician services as well as outpatient diagnostic services, that were provided under the ESSN is positively associated with employment of the needy. In contrast, the use of such services as inpatient care, home care, hoteling and compensated pharmaceuticals indicate poor health and have a negative impact on one’s prospects in the labor market.

Analyzing the use of ”light” health services together (any ”light” service) and use of each service separately we find statistically significant positive effects on employment; the results show that use of all of these health care services is positively associated with employment of needy aged 18-64 (use of “heavy” services and socio-economic parameters controlled).

Therefore we reject the hypothesis that availability of free health care reduced incentives to work within the group if needy persons.

III. Policy Issues and the Implications of the Data Analysis

In addition to the summary of the ESSN HB system included in the end of the first section under "Summary and Recommendations", below some major policy issues and implications of the data analysis are provided.

The ESSN HB system served as a subsidy to hospitals.

Compensation for inpatient care for the poor took up 46% of ESSN funds; in contrast to other services, the full amount of inpatient service expenses was covered from the ESSN,[33] not just inpatient co-payments. While hospitals overspent their budgets on non-poor patients, providing services to needy and LI patients under the ESSN helped hospitals to balance their budgets during the crisis.

Actual spending on inpatient care was noticeably higher than the initial budget allocation, year after year. The health care budget in Latvia was reduced dramatically due to the economic crisis, and as a rule, hospitals exhausted most of their budgets already by the middle of the year and then have to delay provision of health care services paid by state or only provide them to patients who are able to cover full cost of a service themselves. In the middle of each fiscal year the government has to reconsider health budget and the National Health Service has to sign contracts with the hospitals to provide additional financial resources. The Ministry of Health consistently revises its budget allocation in this manner. Probably the goal of this approach has been to hold down budget expenses for inpatient care since cost containment remains a policy priority since the beginning of the financial crisis; it seems to have worked. However, it is associated with long waiting lists.

Moderate state health spending under the ESSN covered about 11% of the total population during the crisis.

Almost 11% of the total population or 222 thousand unique patients were provided with HBs under the ESSN during the economic crisis. The aid to the poor under the program comprised 4.2% of the total state health care budget in 2010-2011 and less than 1%[34] in 2012.

The system designed for the poor under the ESSN has removed two important reasons of unmet medical need in Latvia. First, needy and LI patients didn't have to make any payments at the point of service (except LI persons with monthly income LVL 120-150 who were exempted from ½ of patient's co-payments), therefore the financial obstacle was reduced. Second, a separate waiting list was created for the inpatient care for the poor, therefore the problem of long waiting lists typical for regular patients was reduced substantially for the target group.

[33] For the period July 2010 to December 2011.

[34] Subsidies for the services listed in the Table 1, with the exception for day care for mentally ill patients, are taken into account in these calculations.

The ESSN HB system not only improved health care access among the poor, but also attracted previous non-users who couldn't afford health care or avoided visiting doctors for several years before the ESSN.

There is a distinction between "light" and "heavy" health subsidies for the poor.

Use of "light" health care services, such as GP, outpatient specialist and diagnostic services under the ESSN was positively associated with employment among the needy, therefore "light" health subsidies may be a factor facilitating activation of the poor unemployed impacted by the economic crisis.

The use of "heavy" health care services, such as prescribed medications, inpatient care, hoteling and home care, is negatively associated with the employment of the needy, which is consistent with the hypothesis that many of the poor are poor partially because they are in bad health. This group was more difficult to activate, and "heavy" spending was rather a subsidy for those in poor health who had relatively greater difficulties with in returning to the labor market.

There are advantages to be gained from continuing to allocate safety net funds to all three poverty groups.

The program provided under the ESSN reduced barriers to health care access for the poor and provided a balanced system with stable distribution of subsidies among health care services in 2010 and 2011.

Demand for GP and outpatient specialist services decreased a bit in 2011 compared to 2010 (possibly due to built-up demand having probably been dealt with), while claims for diagnostic procedures and compensated medications grew. If the demand for the former depends a lot on a doctor's opinion on the necessity of diagnostic health checks, the later reflects the growth of actual need for the service in the target group. This growth was observed not only among the poor, but reflects the overall tendency in the total population: the number of patients consuming prescribed medications grows each year in Latvia.

Obviously, the demand for compensated pharmaceuticals was rather high also among LI patients with income LVL 120-150 who were not eligible for the ESSN HB for medications. This group was mostly formed by the elderly people who are the main consumers of the service and who relatively often face catastrophic payments for health, where pharmaceuticals expenditure is the main driver of such payments. Expanding the eligibility for the ESSN HB for compensated medications to LI persons with income LVL 120-150 would increase demand for this service under the ESSN. However, expenses for this service would grow only moderately mainly due to three reasons. First, the new rule for compensation of only the cheapest medication in each category that has come into force on the 1st of January 2012 reduces state expenditures for new users of compensated

pharmaceuticals. Second, in 2010-2011 the group of LI persons with income LVL 120-150 who used the ESSN HB was rather small compared to the other two poverty groups. Third, this group would cover 50% of the co-payment for pharmaceuticals themselves (just as for the other services under the ESSN). Therefore, providing the 50% exemption from co-payments for prescribed medications for this poverty group would provide a large benefit at a relatively low cost.

Efficient use of home care helps to reduce the demand for inpatient care, especially among seniors, and therefore lowers expenses for this costly service. In 2010-2012, the system didn't fully use incentives to substitute part of the unnecessary hospitalization cases with relatively cheaper home care and shorten hospital stays by offering home care when appropriate. Stimulating the use of home care would be important for the health care system in general, however it requires efficient management to make sure that the individual need's assessment and specification of care is adequate.

If all the health services provided under the ESSN except for inpatient care were subsidized for all the three poverty groups[35] (other parameters equal), expenses would total only 2.0-2.5% of total state health spending. And if only patient's co-payment, not the full amount of inpatient service expenses, was covered for the inpatient care and regular waiting list was applied for the poor patients (as it was done in 2012), subsidies for inpatient care would be several times lower[36] and the annual ESSN budget would not exceed 3.0% of the total state health care budget.

In case the safety net is renewed, total expenses are expected to go down as the number of needy people decreases[37]; however this tendency may be offset to some extent as the target group gets better informed about the program and the take-up rate improves.

Replacing the exemption system with a means-tested program.

The current exemption system covers 18 various groups that are exempt from patient co-payments. These groups include children under the age 18, pregnant women, victims of political repression, mentally ill persons etc. Facing a reduced health budget, increased patient's co-payments and high household out-of-pocket spending, initially the MoH intended to target public expenditures to the poor and eliminate other exemptions. In 2009, when the government implemented the ESSN, the MoH proposed to eliminate all of these 18 categories and simply

[35] i.e. if LI patients with income of between LVL 120-150 were also eligible for HB for compensated medications

[36] In 2012, when only patient co-payments were subsidized from the ESSN, expenses per needy patient were four times less compared to second half of 2010 and 2011 when full expenses for inpatient care were covered from the ESSN funds.

[37] The number of needy persons in Latvia decreased over time: 160671 needy persons were registered in February 2012, the number decreased by a third in a year reaching 107522 in February 2013, and only 83811 needy persons were registered in August 2013. However according to the Q4 2013 data of the Ministry of Welfare the number of needy persons grew in September 2013, reaching 85737 persons.

subsidize families falling below the "needy" line, i.e. households with per capita income 50 percent or less of the minimum wage (which was less than LVL 90 under current law).

The proposal was rejected. Since then the safety net simply supplemented the list of exempted persons with one more category: poor people. The income threshold proposed by the MoH in 2009 was low and there was a risk that eliminating the exemption system would evoke strong public resistance and imply an additional burden to some vulnerable groups.

What would have been the risks of eliminating the exemption scheme and replacing it with a means-tested safety net? As seen the safety net covered vulnerable groups, e.g. retirees who fell into poverty, people with serious health problems who faced problems with getting back to the labor market, long term unemployed etc. However, some vulnerable groups would have faced large out-of-pocket payments for health care if the exemption system provided for the 18 categories mentioned above was eliminated.

The list of the main priorities of the health sector in Latvia includes increasing the low birthrate, facilitating longer life and working life, as well as improving social inclusion. According to the results, the LVL 120-150 income category under the ESSN allowed access for retirees who fell into poverty and pre-retirement age individuals who still could return to the labor market. Therefore, the ESSN was targeted at improving the health of older retired and working age people, as well as social inclusion of the poor. Replacing the exemption system with the safety net as proposed in 2009 would have negatively affected non-qualifying pregnant women as well as removing health care for children from non-qualifying households. The income threshold defined under the ESSN was rather low, and increase the risk that households with not very high income levels (but not eligible for the ESSN) would entail increased child care costs due to potentially high out-of-pocket health expenses during and after pregnancy. This is not consistent with the pro-family strategy of the government.

In 2010-2011, with the defined income threshold (LVL 90, LVL 120, LVL 150) and the three poverty groups, the ESSN health subsidies comprised 4.2% of the total state health budget. If the exemption system was eliminated, ESSN expenses would grow considerably, because the target group as well as the coverage would increase due to two main reasons: (1) those previously covered by the exemption system would shift to the ESSN if eligible; and (2) expenses for health care for children from poor households would be covered from ESSN funds, not from the "Treatment" program as it mostly was in 2009-2012.[38]

Replacing the exemption system with a means-tested program is an efficient measure if it minimizes the problem of unmet medical need due to financial reasons among households with relatively low income level. This problem is acute in Latvia and is noticeably greater than in the

[38] Parents from poor households didn't always show their needy or LI certificate when taking their kids to a doctor since children were already covered and they didn't have to pay for these visits, therefore expenses for such visits were usually financed from the program "Treatment", not the ESSN.

other European countries. However the LVL 90-120-150 income breakdown under the ESSN was too low to eliminate this issue and defining the comprehensive income threshold for a means-tested program that would efficiently replace the existing exemption system is therefore critical.

The breakdown by income level and transition period after 2011 was important.

Expanding the target group from needy to low-income persons with monthly incomes of between LVL 90-120 and LVL 120-150, the system covered pre-retirement age persons and retirees who fell into poverty. The breakdown by income level allowed designing an efficient program providing the exemption system for co-payments for inpatient and outpatient care to the poorest persons and compensating half of the co-payments for those with income LVL 120-150.

Similarly in France the CMUC program for the poor is supplemented by a second scheme, involving a voucher (ACS), that has been introduced to subsidize the purchase of private health insurance by all households with incomes below 126 per cent of the CMUC's threshold (in 2011). Therefore people with low incomes who do not qualify for CMUC are also provided with support.

In 2012, all the ESSN HBs were discontinued for LI persons (with incomes between LVL 90-120 and LVL 120-150); as a result the group of the elderly persons who had the lowest probability of getting a job to improve the poor financial situation of their households became ineligible for the HB. Keeping the HB for one of the crucial services, compensated medications for the LI persons after 2011, would smooth the possible negative effect of increased out-of-pocket for health care.

Designing a system that would reliably capture the LI persons and minimize leakage of funds to the higher income groups is very important. The issue is particularly topical in Latvia taking into account that the provision of the HB to LI persons was associated with some administrative problems: while the definition of a LI person under the ESSN was the same, it varied across municipalities under the social assistance program, moreover some municipalities didn't provide social assistance for the LI groups and didn't register them before the ESSN was implemented at all. Therefore in many cases double checking the eligibility of LI persons for the ESSN HB and additional administrative resources were necessary.

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NHS database

Riga Stradins University "Self-assessment of quality of life and its relation to health behavior of Latvian population" survey data, 2008

SSIA database

SOPA database

Appendix

Table A1. Share of needy persons who used at least one ESSN HB in 2010-2012

	2010	2011	2012
Used at least one ESSN health benefit during the period indicated	33%	44%	43%
Didn't use ESSN health benefits during the period indicated	67%	56%	57%
Total number of needy persons registered in SOPA database for at least three months	103160	130211	90022

Notes: The sample comprises persons registered as needy in SOPA for at least three months during the respective year. While SOPA data for the full calendar years 2010 and 2011 year are used, in 2012 we use SOPA data for December-July only (as most of the data were obtained in July 2012). However, full 2012 year data are used in the ESSN data file (due to lag in use of service and payment by NHS)

Table A2. Share of those who reported visiting any medical doctor during the past 12 months in different age groups, year 2008.

Age	Have visited any medical doctor during the past 12 months
15-17	57.7%
18-29	54.1%
30-39	53.6%
40-49	56.3%
50-59	63.9%
60-64	77.6%

Source: Self-Assessment of Quality of Life and Its Relation to Health Behavior of Latvian Population survey data

Table A3. Age distribution of needy registered in SOPA, by municipality type

Age	Municipality type						
	City	Other urban	Mixed	Rural	Outside Latvia	Unknown	Total
Up to 17 years old	31%	34%	37%	38%	39%	1%	34%
18-29 years	16%	16%	17%	16%	37%	20%	17%
30-39 years	14%	15%	13%	13%	13%	47%	14%
40-49 years	14%	13%	13%	13%	7%	27%	14%
50-59 years	15%	13%	14%	13%	3%	3%	14%
60-69 years	6%	5%	4%	5%	1%	0%	5%
70 years and above	4%	3%	2%	3%	0%	0%	3%

Notes: The sample comprises persons registered as needy in SOPA for at least one month from November 2009 to July 2012.

Table A4. Total ESSN expenses, number of claims and expenses per one claim by health service and year

MEDICATIONS

	ESSN expenses, LVL				Number of claims				Expenses per one claim, LVL	
	Needy & LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL 150
2009	9057		9057		364		364		24.9	
2010	2942939		2942939		142274		142274		20.7	
2011	5470508		5470508		249488		249488		21.9	
2012	288088		288088		15339		15339		18.8	

GP

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
2009	16171			**16171**	**100%**	10433			**10433**	**100%**	1.5		
2010	284113	53770	14481	**352364**	**81%**	196246	41063	20166	**257475**	**76%**	1.4	1.3	0.7
2011	495375	94628	41462	**631465**	**78%**	244778	49792	34446	**329016**	**74%**	2.0	1.9	1.2
2012	291748	0	0	**291748**	**100%**	215249	0	0	**215249**	**100%**	1.4		

SECONDARY OUTPATIENT DIAGNOSTICS

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
2009	20797			**20797**	**100%**	5995			**5995**	**100%**	3.5		
2010	1201087	347056	203227	**1751370**	**69%**	117800	24828	14139	**156767**	**75%**	10.2	**14.0**	**14.4**
2011	2160748	573251	500348	**3234347**	**67%**	173366	37752	26523	**237641**	**73%**	12.5	**15.2**	**18.9**
2012	624233	0	0	**624233**	**100%**	85219	0	0	**85219**	**100%**	7.3		

SECONDARY OUTPATIENT PHYSICIAN

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
2009	141008			**141008**	**100%**	8727			**8727**	**100%**	16.2		
2010	1817332	355058	167265	**2339654**	**78%**	134541	26142	16445	**177128**	**76%**	13.5	13.6	10.2
2011	2710523	702345	318860	**3731729**	**73%**	166328	34690	27654	**228672**	**73%**	16.3	20.2	11.5
2012	1511434	570	3280	**1515284**	**100%**	112064	4	17	**112085**	**100%**	13.5	142.5	193.0

HOME CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
2009	968			**968**	**100%**	102			**102**	**100%**	9.5		
2010	48038	7583	10430	**66050**	**73%**	5062	799	1099	**6960**	**73%**	9.5	9.5	9.5
2011	70356	12621	23263	**106239**	**66%**	6949	1235	2187	**10371**	**67%**	10.1	10.2	10.6
2012	28788	562	3280	**32631**	**88%**	2721	49	286	**3056**	**89%**	10.6	11.5	11.5

HOTELING

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
2009	60621			**60621**	**100%**	6449			**6449**	**100%**	9.4		
2010	385174	72136	9945	**467255**	**82%**	40976	7674	2116	**50766**	**81%**	9.4	9.4	4.7
2011	411382	143980	24172	**579534**	**71%**	43764	15317	5143	**64224**	**68%**	9.4	9.4	4.7
2012	0	0	0	**0**		0	0	0	**0**				

DENTAL CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
2009	0			**0**		0			**0**				
2010	8576	227	141	**8944**	**96%**	655	19	8	**682**	**96%**	13.1	11.9	17.7
2011	43225	1420	222	**44867**	**96%**	2912	146	15	**3073**	**95%**	14.8	9.7	14.8
2012	0	0	0	**0**		0	0	0	**0**				

INPATIENT SERVICES

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
2009	229373			**229373**	**100%**	2206			**2206**	**100%**	104.0		
2010	5493758	938586	1025019	**7457363**	**74%**	29070	4213	5246	**38529**	**75%**	189.0	222.8	195.4
2011	8312394	2046594	1672580	**12031568**	**69%**	24230	5779	5370	**35379**	**68%**	343.1	354.1	311.5
2012	1556751	10584	3460	**1570794**	**99%**	17724	134	150	**18008**	**98%**	87.8	79.0	23.1
2013	26113	0	0	**26113**		201	0	0	**201**				

Notes: The sample comprises ESSN patients (except mixed poverty group).

Table A5. Total ESSN expenses, number of claims and expenses per one claim by health service and age of patients

MEDICATIONS

	ESSN expenses, LVL			Number of claims			Expenses per one claim, LVL	
	Needy & LI below LVL 120	LI below LVL150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL150
Up to 17 years old	375614		**375614**		21572		**21572**		17.4	
18-29 years	1047573		**1047573**		9936		**9936**		105.4	
30-39 years	1414749		**1414749**		21782		**21782**		65.0	
40-49 years	1871559		**1871559**		53826		**53826**		34.8	
50-59 years	2044132		**2044132**		131130		**131130**		15.6	
60-69 years	1234924		**1234924**		102752		**102752**		12.0	
70 years and above	722041		**722041**		66467		**66467**		10.9	
Total	8710592		**8710592**		407465		**407465**		21.4	

GP

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL			
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Up to 17 years old	198973	9168	537	**208678**	95%	101672	3953	247	**105872**	96%	2.0	2.3	2.2
18-29 years	121437	11861	625	**133923**	91%	77048	7154	666	**84868**	91%	1.6	1.7	0.9
30-39 years	126781	13559	783	**141122**	90%	80122	8286	1054	**89462**	90%	1.6	1.6	0.7
40-49 years	180114	22941	2480	**205535**	88%	115046	14588	2743	**132377**	87%	1.6	1.6	0.9
50-59 years	259530	37357	7308	**304194**	85%	165835	23675	6914	**196424**	84%	1.6	1.6	1.1
60-69 years	122536	29684	20033	**172253**	71%	81356	19914	22125	**123395**	66%	1.5	1.5	0.9
70 years and above	78036	23829	24177	**126042**	62%	45627	13285	20863	**79775**	57%	1.7	1.8	1.2
Total	1087406	148399	55942	**1291747**	84%	666706	90855	54612	**812173**	82%	1.6	1.6	1.0

SECONDARY OUTPATIENT DIAGNOSTICS

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL			
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Up to 17 years old	135330	7191	1075	**143596**	94%	9747	765	96	**10608**	92%	13.9	9.4	11.2
18-29 years	401984	50403	6965	**459352**	88%	48730	5256	728	**54714**	89%	8.2	9.6	9.6
30-39 years	553115	90929	15889	**659933**	84%	59405	6578	859	**66842**	89%	9.3	13.8	18.5
40-49 years	896206	152098	53049	**1101353**	81%	84442	11339	2501	**98282**	86%	10.6	13.4	21.2
50-59 years	1258628	291544	80983	**1631156**	77%	112263	18286	5971	**136520**	82%	11.2	15.9	13.6
60-69 years	543711	231494	327535	**1102741**	49%	46219	13454	18442	**78115**	59%	11.8	17.2	17.8
70 years and above	217891	96647	218080	**532617**	41%	21574	6902	12065	**40541**	53%	10.1	14.0	18.1
Total	4006865	920306	703575	**5630747**	71%	382380	62580	40662	**485622**	79%	10.5	14.7	17.3

SECONDARY OUTPATIENT PHYSICIAN

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Up to 17 years old	601195	22464	1313	**624973**	96%	14226	764	59	**15049**	95%	42.3	29.4	22.3
18-29 years	676067	84611	8611	**769290**	88%	64644	5704	761	**71109**	91%	10.5	14.8	11.3
30-39 years	891896	137332	9727	**1038954**	86%	70210	6789	1111	**78110**	90%	12.7	20.2	8.8
40-49 years	1249238	189697	24641	**1463575**	85%	89806	11370	2552	**103728**	87%	13.9	16.7	9.7
50-59 years	1663735	281302	63367	**2008404**	83%	113320	16671	6166	**136157**	83%	14.7	16.9	10.3
60-69 years	719107	205579	196844	**1121529**	64%	46321	12391	18853	**77565**	60%	15.5	16.6	10.4
70 years and above	379059	136988	184903	**700950**	54%	23133	7147	14614	**44894**	52%	16.4	19.2	12.7
Total	6180297	1057973	489405	**7727675**	80%	421660	60836	44116	**526612**	80%	14.7	17.4	11.1

HOME CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Up to 17 years old	1219	0	0	**1219**	100%	121	0	0	**121**	100%	10.1		
18-29 years	12742	83	1015	**13839**	92%	1225	10	99	**1334**	92%	10.4	8.3	10.3
30-39 years	7685	95	380	**8160**	94%	803	10	39	**852**	94%	9.6	9.5	9.7
40-49 years	10780	397	2453	**13630**	79%	1075	40	218	**1333**	81%	10.0	9.9	11.3
50-59 years	39145	2836	2030	**44011**	89%	3980	295	196	**4471**	89%	9.8	9.6	10.4
60-69 years	26693	6653	6294	**39640**	67%	2749	663	666	**4078**	67%	9.7	10.0	9.5
70 years and above	49887	10701	24801	**85389**	58%	4881	1065	2354	**8300**	59%	10.2	10.0	10.5
Total	148150	20766	36973	**205888**	72%	14834	2083	3572	**20489**	72%	10.0	10.0	10.4

HOTELING

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Up to 17 years old	149704	6665	108	**156477**	96%	15926	709	23	**16658**	96%	9.4	9.4	4.7
18-29 years	55385	13235	301	**68921**	80%	5892	1408	64	**7364**	80%	9.4	9.4	4.7
30-39 years	93483	32938	367	**126787**	74%	9945	3504	78	**13527**	74%	9.4	9.4	4.7
40-49 years	159274	45261	1575	**206109**	77%	16944	4815	335	**22094**	77%	9.4	9.4	4.7
50-59 years	222620	48701	5367	**276689**	80%	23683	5181	1142	**30006**	79%	9.4	9.4	4.7
60-69 years	114689	37553	10387	**162629**	71%	12201	3995	2210	**18406**	66%	9.4	9.4	4.7
70 years and above	62021	31763	16013	**109797**	56%	6598	3379	3407	**13384**	49%	9.4	9.4	4.7
Total	857177	216115	34117	**1107409**	77%	91189	22991	7259	**121439**	75%	9.4	9.4	4.7

DENTAL CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Up to 17 years old	50864	1647	364	**52874**	96%	3528	165	23	**3716**	95%	14.4	10.0	15.8
18-29 years	928	0	0	**928**	100%	38	0	0	**38**	100%	24.4		
30-39 years	0	0	0	**0**		0	0	0	**0**				
40-49 years	9	0	0	**9**	100%	1	0	0	**1**	100%	8.9		
50-59 years	0	0	0	**0**		0	0	0	**0**				
60-69 years	0	0	0	**0**		0	0	0	**0**				
70 years and above	0	0	0	**0**		0	0	0	**0**				
Total	51800	1647	364	**53811**	96%	3567	165	23	**3755**	95%	14.5	10.0	15.8

INPATIENT

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Up to 17 years old	711654	24818	881	**737353**	97%	4375	115	8	**4498**	97%	162.7	215.8	110.2
18-29 years	1586499	190474	41601	**1818573**	87%	9191	699	146	**10036**	92%	172.6	272.5	284.9
30-39 years	2033898	235066	49923	**2318887**	88%	10760	867	199	**11826**	91%	189.0	271.1	250.9
40-49 years	3309653	518641	111492	**3939786**	84%	14452	1527	458	**16437**	88%	229.0	339.6	243.4
50-59 years	4373843	822279	309709	**5505831**	79%	19162	2520	1094	**22776**	84%	228.3	326.3	283.1
60-69 years	2258700	713580	1094372	**4066652**	56%	9776	2505	4002	**16283**	60%	231.0	284.9	273.5
70 years and above	1344141	490907	1093081	**2928129**	46%	5715	1893	4859	**12467**	46%	235.2	259.3	225.0
Total	15618388	2995764	2701058	**21315210**	73%	73431	10126	10766	**94323**	78%	212.7	295.8	250.9

Table A6. Total ESSN expenses, number of claims and expenses per one claim by health service and gender

MEDICATIONS

	ESSN expenses, LVL				Number of claims				Expenses per one claim, LVL	
	Needy & LI below LVL 120	LI below LVL150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL150
Male	3763050	0	**3763050**		135701	0	**135701**		27.7	
Female	4947542	0	**4947542**		271764	0	**271764**		18.2	

GP

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Male	443176	54896	14318	**512390**	86%	249750	31505	12411	**293666**	85%	1.8	1.7	1.2
Female	644230	93503	41624	**779357**	83%	416956	59350	42201	**518507**	80%	1.5	1.6	1.0

SECONDARY OUTPATIENT DIAGNOSTICS

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Male	1360139	327213	231200	**1918551**	71%	116605	17824	8244	**142673**	82%	11.7	18.4	28.0
Female	2646726	593094	472376	**3712196**	71%	265775	44756	32418	**342949**	77%	10.0	13.3	14.6

SECONDARY OUTPATIENT PHYSICIAN

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Male	2233480	381497	131387	**2746364**	81%	131438	18259	9612	**159309**	83%	17.0	20.9	13.7
Female	3946817	676476	358018	**4981311**	79%	290222	42577	34504	**367303**	79%	13.6	15.9	10.4

HOME CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Male	66440	10341	19673	**96454**	69%	6641	1050	1866	**9557**	69%	10.0	9.8	10.5
Female	81710	10425	17300	**109434**	75%	8193	1033	1706	**10932**	75%	10.0	10.1	10.1

HOTELING

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Male	377184	93380	9790	**480354**	79%	40126	9934	2083	**52143**	77%	9.4	9.4	4.7
Female	479992	122736	24327	**627055**	77%	51063	13057	5176	**69296**	74%	9.4	9.4	4.7

DENTAL CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Male	24890	871	172	**25933**	96%	1704	87	13	**1804**	94%	14.6	10.0	13.2
Female	26910	776	192	**27878**	97%	1863	78	10	**1951**	95%	14.4	9.9	19.2

INPATIENT

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150	**Total**	**Needy, % of all**	Needy	LI below LVL120	LI below LVL150
Male	8469419	1605340	978537	**11053296**	77%	36551	4805	3441	**44797**	82%	231.7	334.1	284.4
Female	7148970	1390423	1722521	**10261914**	70%	36880	5321	7325	**49526**	74%	193.8	261.3	235.2

Table A7. ESSN expenses, number of claims and expenses per one claim by health service and municipality

MEDICATIONS

	ESSN expenses, LVL				Number of claims				Expenses per one claim, LVL	
	Needy & LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy & LI below LVL 120	LI below LVL 150
Riga	2551202		2551202	100%	88469		88469	100%	28.8	
Daugavpils	188511		188511	100%	6743		6743	100%	28.0	
Liepaja	242210		242210	100%	10382		10382	100%	23.3	
Jelgava	181881		181881	100%	6764		6764	100%	26.9	
Jurmala	159296		159296	100%	3504		3504	100%	45.5	
Other urban	733731		733731	100%	32257		32257	100%	22.7	
Rural or mixed	4638818		4638818	100%	259128		259128	100%	17.9	
NA	14943		14943	100%	218		218	100%	68.5	
Total	8710592		8710592	100%	407465		407465	100%	21.4	

GP

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
Riga	166809	38143	15480	220432	76%	104679	26649	19685	151013	69%	1.6	1.4	0.8
Daugavpils	40666	2263	1570	44499	91%	25363	1550	1659	28572	89%	1.6	1.5	0.9
Liepaja	19771	3841	1548	25160	79%	13623	2769	1908	18300	74%	1.5	1.4	0.8
Jelgava	20205	1178	566	21949	92%	14377	873	662	15912	90%	1.4	1.3	0.9
Jurmala	15630	900	367	16897	93%	11499	725	637	12861	89%	1.4	1.2	0.6
Other urban	86987	12551	6667	106205	82%	51672	6250	4745	62667	82%	1.7	2.0	1.4
Rural or mixed	735485	89297	29709	854492	86%	444325	51864	25276	521465	85%	1.7	1.7	1.2
NA	1854	224	34	2112	88%	1168	175	40	1383	84%	1.6	1.3	0.9
Total	1087406	148399	55942	1291747	84%	666706	90855	54612	812173	82%	1.6	1.6	1.0

SECONDARY OUTPATIENT DIAGNOSTICS

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
Riga	1203441	306196	277203	1786841	67%	103872	21916	18981	144769	72%	11.6	14.0	14.6
Daugavpils	132811	19309	20469	172589	77%	12941	1343	1220	15504	83%	10.3	14.4	16.8
Liepaja	90236	31922	27964	150123	60%	8073	2099	1357	11529	70%	11.2	15.2	20.6
Jelgava	108509	35101	13343	156953	69%	10113	1007	806	11926	85%	10.7	34.9	16.6
Jurmala	63723	14050	7187	84960	75%	6625	619	480	7724	86%	9.6	22.7	15.0
Other urban	326512	55539	49415	431467	76%	32450	3971	2948	39369	82%	10.1	14.0	16.8
Rural or mixed	2074404	457443	307784	2839630	73%	207372	31515	14845	253732	82%	10.0	14.5	20.7
NA	7228	746	210	8184	88%	934	110	25	1069	87%	7.7	6.8	8.4
Total	4006865	920306	703575	5630747	71%	382380	62580	40662	485622	79%	10.5	14.7	17.3

SECONDARY OUTPATIENT PHYSICIAN

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
Riga	1579727	293869	191073	2064669	77%	108621	21737	21257	151615	72%	14.5	13.5	9.0
Daugavpils	152158	15948	8934	177040	86%	15968	1531	1497	18996	84%	9.5	10.4	6.0
Liepaja	90972	25810	20777	137558	66%	8107	1587	976	10670	76%	11.2	16.3	21.3
Jelgava	183391	13209	7228	203827	90%	11385	992	753	13130	87%	16.1	13.3	9.6
Jurmala	104699	13805	6123	124626	84%	9787	1468	711	11966	82%	10.7	9.4	8.6
Other urban	479645	58515	36421	574582	83%	36902	3762	3511	44175	84%	13.0	15.6	10.4
Rural or mixed	3576380	634440	218592	4429412	81%	229782	29595	15388	274765	84%	15.6	21.4	14.2
NA	13325	2378	258	15961	83%	1108	164	23	1295	86%	12.0	14.5	11.2
Total	6180297	1057973	489405	7727675	80%	421660	60836	44116	526612	80%	14.7	17.4	11.1

HOME CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
Riga	2546	783	2899	6228	41%	255	70	288	613	42%	10.0	11.2	10.1
Daugavpils	57	305	53	415	14%	5	30	5	40	13%	11.5	10.2	10.7
Liepaja	3951	2007	2413	8371	47%	386	211	247	844	46%	10.2	9.5	9.8
Jelgava	885	792	0	1677	53%	83	72	0	155	54%	10.7	11.0	
Jurmala	618	23	0	641	96%	61	3	0	64	95%	10.1	7.5	
Other urban	9946	471	1217	11634	85%	958	48	122	1128	85%	10.4	9.8	10.0
Rural or mixed	129596	16385	30391	176372	73%	13014	1649	2910	17573	74%	10.0	9.9	10.4
NA	550	0	0	550	100%	72	0	0	72	100%	7.6		
Total	148150	20766	36973	205888	72%	14834	2083	3572	20489	72%	10.0	10.0	10.4

HOTELING

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
Riga	201000	49557	12253	262810	76%	21383	5272	2607	29262	73%	9.4	9.4	4.7
Daugavpils	6561	122	0	6683	98%	698	13	0	711	98%	9.4	9.4	
Liepaja	5715	1871	649	8234	69%	608	199	138	945	64%	9.4	9.4	4.7
Jelgava	9268	996	179	10443	89%	986	106	38	1130	87%	9.4	9.4	4.7
Jurmala	18198	4681	118	22997	79%	1936	498	25	2459	79%	9.4	9.4	4.7
Other urban	63187	10049	1349	74584	85%	6722	1069	287	8078	83%	9.4	9.4	4.7
Rural or mixed	549439	147890	19571	716900	77%	58451	15733	4164	78348	75%	9.4	9.4	4.7
NA	3807	949	0	4756	80%	405	101	0	506	80%	9.4	9.4	
Total	857177	216115	34117	1107409	77%	91189	22991	7259	121439	75%	9.4	9.4	4.7

DENTAL CARE

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
Riga	3562	18	22	3602	99%	180	2	3	185	97%	19.8	9.0	7.2
Daugavpils	142	0	0	142	100%	5	0	0	5	100%	28.4		
Liepaja	606	0	0	606	100%	70	0	0	70	100%	8.7		
Jelgava	840	0	0	840	100%	78	0	0	78	100%	10.8		
Jurmala	225	0	0	225	100%	5	0	0	5	100%	44.9		
Other urban	6103	350	193	6646	92%	436	26	10	472	92%	14.0	13.5	19.3
Rural or mixed	40189	1279	149	41617	97%	2784	137	10	2931	95%	14.4	9.3	14.9
NA	133	0	0	133	100%	9	0	0	9	100%	14.8		
Total	51800	1647	364	53811	96%	3567	165	23	3755	95%	14.5	10.0	15.8

INPATIENT

	ESSN expenses, LVL					Number of claims					Expenses per one claim, LVL		
	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150	**Total**	**Needy, % of all**	Needy	LI below LVL 120	LI below LVL 150
Riga	2817251	400128	733480	3950859	71%	11121	1308	2940	15369	72%	253.3	305.9	249.5
Daugavpils	667356	84270	54593	806219	83%	3281	275	223	3779	87%	203.4	306.4	244.8
Liepaja	319648	118243	82633	520524	61%	1584	322	361	2267	70%	201.8	367.2	228.9
Jelgava	321180	30950	47131	399261	80%	1536	121	187	1844	83%	209.1	255.8	252.0
Jurmala	176635	28239	15525	220399	80%	894	101	84	1079	83%	197.6	279.6	184.8
Other urban	1192994	207893	199157	1600044	75%	6210	772	894	7876	79%	192.1	269.3	222.8
Rural or mixed	10058141	2123517	1560327	13741985	73%	48534	7213	6043	61790	79%	207.2	294.4	258.2
NA	65182	2524	8213	75919	86%	271	14	34	319	85%	240.5	180.3	241.5
Total	15618389	2995764	2701058	21315211	73%	73431	10126	10766	94323	78%	212.7	295.8	250.9

Table A8. Age characteristics of the ESSN patients, by municipality

		Riga						Daugavpils			
		All	Needy	LI below LVL 120	LI below LVL 150			All	Needy	LI below LVL 120	LI below LVL 150
2009	Up to 17 years old	2%	2%			2009	Up to 17 years old	0%	0%		
	18-29 years	13%	13%				18-29 years	22%	22%		
	30-39 years	13%	13%				30-39 years	16%	16%		
	40-49 years	19%	19%				40-49 years	20%	20%		
	50-59 years	25%	25%				50-59 years	26%	26%		
	60-69 years	15%	15%				60-69 years	9%	9%		
	70 years and above	13%	13%				70 years and above	8%	8%		
	N	*2257*	*2257*				*N*	*608*	*608*		
2010	Up to 17 years old	5%	5%	2%	0%	2010	Up to 17 years old	15%	16%	2%	1%
	18-29 years	12%	13%	10%	2%		18-29 years	15%	16%	9%	3%
	30-39 years	11%	12%	11%	3%		30-39 years	15%	16%	13%	3%
	40-49 years	15%	17%	17%	6%		40-49 years	17%	18%	16%	3%
	50-59 years	20%	21%	23%	11%		50-59 years	17%	17%	24%	11%
	60-69 years	16%	14%	18%	30%		60-69 years	14%	11%	25%	58%
	70 years and above	22%	17%	18%	49%		70 years and above	7%	6%	12%	21%
	N	*23005*	*18456*	*7473*	*5506*		*N*	*3159*	*2919*	*416*	*270*
2011	Up to 17 years old	8%	9%	3%	0%	2011	Up to 17 years old	21%	22%	4%	0%
	18-29 years	12%	14%	10%	3%		18-29 years	14%	15%	9%	3%
	30-39 years	12%	13%	11%	4%		30-39 years	13%	14%	13%	4%
	40-49 years	14%	16%	16%	7%		40-49 years	16%	17%	19%	6%
	50-59 years	19%	20%	22%	13%		50-59 years	16%	16%	21%	12%
	60-69 years	15%	13%	18%	27%		60-69 years	13%	11%	23%	49%
	70 years and above	20%	15%	20%	46%		70 years and above	7%	6%	11%	26%
	N	*33541*	*26880*	*11268*	*7714*		*N*	*5330*	*4843*	*979*	*596*
2012	Up to 17 years old	8%	8%			2012	Up to 17 years old	25%	25%		
	18-29 years	15%	15%				18-29 years	15%	15%		
	30-39 years	15%	15%				30-39 years	14%	14%		
	40-49 years	17%	17%				40-49 years	17%	17%		
	50-59 years	23%	23%				50-59 years	16%	16%		
	60-69 years	13%	13%				60-69 years	9%	9%		
	70 years and above	10%	10%				70 years and above	4%	4%		
	N	*18025*	*18025*				*N*	*3660*	*3660*		

		Liepaja						Jelgava			
		All	Needy	LI below LVL 120	LI below LVL 150			All	Needy	LI below LVL 120	LI below LVL 150
2009	Up to 17 years old	5%	5%			2009	Up to 17 years old	4%	4%		
	18-29 years	15%	15%				18-29 years	13%	13%		
	30-39 years	21%	21%				30-39 years	17%	17%		
	40-49 years	20%	20%				40-49 years	27%	27%		
	50-59 years	28%	28%				50-59 years	25%	25%		
	60-69 years	7%	7%				60-69 years	9%	9%		
	70 years and above	3%	3%				70 years and above	5%	5%		
	N	*262*	*262*				*N*	*175*	*175*		
2010	Up to 17 years old	9%	10%	2%	0%	2010	Up to 17 years old	11%	11%	4%	0%
	18-29 years	13%	14%	13%	4%		18-29 years	14%	14%	9%	2%
	30-39 years	14%	15%	14%	5%		30-39 years	15%	15%	12%	1%
	40-49 years	15%	16%	18%	7%		40-49 years	17%	18%	17%	6%
	50-59 years	21%	22%	26%	12%		50-59 years	20%	21%	24%	9%
	60-69 years	15%	13%	16%	43%		60-69 years	13%	11%	20%	46%
	70 years and above	12%	10%	12%	29%		70 years and above	11%	10%	13%	35%
	N	*2739*	*2344*	*782*	*346*		*N*	*1845*	*1707*	*245*	*149*
2011	Up to 17 years old	13%	14%	7%	3%	2011	Up to 17 years old	20%	21%	3%	0%
	18-29 years	13%	14%	12%	4%		18-29 years	14%	15%	10%	4%
	30-39 years	13%	14%	11%	5%		30-39 years	13%	13%	12%	4%
	40-49 years	15%	16%	16%	7%		40-49 years	15%	16%	18%	7%
	50-59 years	18%	19%	22%	14%		50-59 years	17%	18%	22%	13%
	60-69 years	15%	13%	18%	35%		60-69 years	12%	10%	20%	38%
	70 years and above	13%	10%	14%	31%		70 years and above	8%	7%	15%	34%
	N	*4526*	*3721*	*1205*	*749*		*N*	*3039*	*2814*	*510*	*267*
2012	Up to 17 years old	15%	15%			2012	Up to 17 years old	21%	21%		
	18-29 years	13%	13%				18-29 years	15%	15%		
	30-39 years	16%	16%				30-39 years	14%	14%		
	40-49 years	17%	17%				40-49 years	16%	16%		
	50-59 years	21%	21%				50-59 years	19%	19%		
	60-69 years	11%	11%				60-69 years	9%	9%		
	70 years and above	7%	7%				70 years and above	5%	5%		
	N	*2064*	*2064*				*N*	*2162*	*2162*		

		Jurmala			
		All	Needy	LI below LVL 120	LI below LVL 150
2009	Up to 17 years old	0%	0%		
	18-29 years	18%	18%		
	30-39 years	18%	18%		
	40-49 years	25%	25%		
	50-59 years	24%	24%		
	60-69 years	8%	8%		
	70 years and above	8%	8%		
	N	*159*	*159*		
2010	Up to 17 years old	8%	8%	2%	0%
	18-29 years	15%	15%	17%	5%
	30-39 years	15%	15%	12%	3%
	40-49 years	16%	17%	19%	9%
	50-59 years	21%	21%	20%	19%
	60-69 years	14%	13%	16%	37%
	70 years and above	10%	9%	13%	27%
	N	*1963*	*1784*	*446*	*158*
2011	Up to 17 years old	19%	20%	5%	3%
	18-29 years	14%	14%	12%	4%
	30-39 years	12%	12%	11%	3%
	40-49 years	16%	16%	21%	13%
	50-59 years	19%	19%	23%	18%
	60-69 years	11%	11%	16%	37%
	70 years and above	8%	7%	11%	23%
	N	*2556*	*2360*	*562*	*235*
2012	Up to 17 years old	21%	21%		
	18-29 years	14%	14%		
	30-39 years	15%	15%		
	40-49 years	14%	14%		
	50-59 years	20%	20%		
	60-69 years	10%	10%		
	70 years and above	7%	7%		
	N	*1645*	*1645*		

Notes: The sample comprises ESSN patients registered in five municipalities (except mixed poverty group).

Table A9. Age characteristics of the LI patients with income below LVL120 who used outpatient diagnostic services under ESSN, by municipality

Age	Municipality				
	Riga	Daugavpils	Liepaja	Jelgava	Jurmala
Up to 17 years old	2%	4%	2%	1%	1%
18-29 years	9%	10%	9%	8%	12%
30-39 years	11%	13%	12%	9%	9%
40-49 years	18%	20%	18%	20%	21%
50-59 years	25%	21%	29%	26%	28%
60-69 years	20%	25%	18%	21%	19%
70 years and above	16%	7%	11%	15%	10%

Notes: The sample comprises ESSN patients with low income below LVL 120 who used diagnostic services under the ESSN at least once.

Table A10. Share of those who reported visiting any medical doctor during the past 12 months in different income groups, year 2008.

Income per household member	Have visited any medical doctor during the past 12 months		Number of observations
	Yes	No	
I quintile	54%	46%	114
II quintile	64%	36%	109
III quintile	65%	35%	132
IV quintile	56%	44%	153
V quintile	52%	48%	134
NA	58%	42%	351
Total	58%	42%	993

Note: The sample comprises 17-64 years old residents of Latvia.

Source: Self-Assessment of Quality of Life and Its Relation to Health Behavior of Latvian Population survey data.

Table A11. Number of claims per needy ESSN patient by age groups and type of service, 2010-2012

	Age groups	TYPES OF HEALTH SERVICES							
		MEDICATIONS	GP	SECONDARY OUTPA-TIENT DIAGNOSTICS	SECONDARY OUTPA-TIENT PHYSICIAN	HOME CARE	HOTELING	DENTAL CARE	INPATIENT
2010	Up to 17 years old	0.6	2.0	0.2	0.2	0.00	0.49	0.052	0.14
	18-29	0.2	1.7	1.0	1.4	0.04	0.18	0.001	0.24
	30-39	0.5	2.0	1.5	1.7	0.01	0.35	0.000	0.32
	40-49	1.0	2.4	1.8	1.9	0.02	0.55	0.000	0.36
	50-59	2.2	3.0	2.1	2.1	0.07	0.61	0.000	0.42
	60-69	3.0	3.0	1.9	2.0	0.11	0.58	0.000	0.47
	70 years and above	2.5	2.5	1.2	1.5	0.25	0.50	0.000	0.44
	MEAN IN 2010	**1.4**	**2.4**	**1.4**	**1.6**	**0.1**	**0.5**	**0.0**	**0.3**
2011	Up to 17 years old	0.6	1.9	0.3	0.3	0.00	0.38	0.132	0.09
	18-29	0.3	1.5	1.2	1.3	0.02	0.17	0.006	0.16
	30-39	0.8	1.8	1.7	1.7	0.03	0.38	0.000	0.22
	40-49	1.4	2.2	2.0	1.9	0.03	0.46	0.000	0.25
	50-59	2.9	2.8	2.4	2.1	0.08	0.57	0.000	0.29
	60-69	4.0	3.1	2.3	2.1	0.12	0.62	0.000	0.34
	70 years and above	3.4	2.6	1.6	1.6	0.27	0.46	0.000	0.32
	MEAN IN 2011	**1.8**	**2.2**	**1.6**	**1.6**	**0.1**	**0.4**	**0.0**	**0.2**
2012	Up to 17 years old	0.1	2.4	0.1	0.2	0.00			0.04
	18-29	0.0	1.6	0.7	1.1	0.01			0.13
	30-39	0.1	1.8	0.9	1.4	0.01			0.20
	40-49	0.1	2.2	1.2	1.5	0.02			0.22
	50-59	0.2	2.8	1.4	1.6	0.03			0.26
	60-69	0.4	2.7	1.1	1.3	0.05			0.26
	70 years and above	0.3	2.0	0.6	0.8	0.20			0.20
	MEAN IN 2012	**0.2**	**2.2**	**0.9**	**1.2**	**0.0**	**0.0**	**0.0**	**0.2**

Notes: The sample comprises needy ESSN patients, 2010, 2011 and 2012. Data do not allow us to distinguish between needy and LI patients with incomes below LVL120 for medications in 2010 and 2011. Therefore, the mean for needy and LI patients together is provided in the table for 2010 and 2011.

Table A12. Demographic characteristics of long-term unemployed ESSN beneficiaries (unemployed during 2007-2009) compared to average ESSN patient

Demographic characteristics		Unemployed during 2007-2009, %	ESSN patients (18-56), %	Difference
		1	2	(1-2)
Age	18-29	25.8	24.3	1.4
	30-39	23.3	26.7	-3.4
	40-49	29.2	29.7	-0.5
	50-56	21.8	19.3	2.5
Gender	Male	39.2	40.0	-0.8
	Female	60.8	60.0	0.8
Municipality type	Riga	17.0	20.6	**-3.6**
	Daugavpils	3.5	3.2	0.3
	Liepaja	2.7	2.9	-0.2
	Jelgava	1.8	2.0	-0.2
	Jurmala	1.8	1.8	-0.1
	Other urban	8.0	9.4	-1.4
	Rural or mixed	65.0	59.7	**5.3**
	NA	0.3	0.3	-0.1
Disability (from SOPA database)		(at least[39]) 17.4	(at least) 9.6	7.8

Note: The sample comprises ESSN patients who were 18-56 years old in 2007 and who were registered in the VSAA database.

[39] The SOPA database doesn't contain information on all the ESSN patients.

Table A13. Descriptive statistics: socio-demographic characteristics of the sample (part I)

Characteristics	Items	N	%
Gender	Male	43167	46.67
	Female	49329	53.33
Age	18-24	16852	18.22
	25-34	18764	20.29
	35-44	21199	22.92
	45-54	21671	23.43
	55-64	14010	15.15
Place of residence - urban / rural	City	42197	45.62
	Other urban	2958	3.2
	Mixed	37420	40.46
	Rural	9921	10.73
Place of residence - region	Riga city	25920	28.02
	Pieriga	13987	15.12
	Vidzeme	10207	11.04
	Zemgale	13993	15.13
	Kurzeme	12762	13.80
	Latgale	15627	16.89
Marital status	Single	55734	60.26
	Married	27706	29.95
	Divorced	6458	6.98
	Widowed	2598	2.81
Household size	1	53200	57.52
	2	17442	18.86
	3	11025	11.92
	4	6855	7.41
	5 and more	3974	4.30
Number of kids 16 y.o. and less in the HH	No kids	63844	69.02
	1	15893	17.18
	2-3	11378	12.30
	4 and more	1381	1.49
Ethnicity and citizenship	Latvians, citizens of Latvia	47213	51.04
	Non-Latvians, citizens of Latvia	25182	27.22
	Noncitizens, FSU countries' nationals	19880	21.49
	Other	221	0.24

Table A13. Descriptive statistics: socio-demographic characteristics of the sample (part II)

Characteristics	Items	N	%
Education	Basic	6977	7.54
	Secondary	5807	6.28
	Vocational	1445	1.56
	Prof. secondary	5692	6.15
	Prof. higher	605	0.65
	Higher	183	0.20
	Not known	71787	77.61
Last employer before the unemployment spell	Private company	1783	1.93
	Farm / Fishery	1069	1.16
	Individual or family enterprise	54939	59.4
	Public institution	5091	5.50
	Self employed	202	0.22
	Other	530	0.57
	Unknown	5701	6.16
	Wasn't employed during 2005-2009	23181	25.06
Health services used under the ESSN from October 2009 to December 2011	'Light' health services	50309	54.39
	'Heavy' health services	17300	18.70
	General physician	40314	43.58
	Secondary outpatient physician	32977	35.65
	Secondary outpatient diagnostics	32800	35.46
	Home care	118	0.13
	Hoteling	2576	2.78
	Inpatient care	10096	10.92
	Medications	7980	8.63

Notes: The sample comprises 18-64 years old persons who were registered as needy in the SOPA database for at least 3 months during October 2009 – December 2011.

Table A14. Association between employment and socioeconomic factors and use of various health care services under the ESSN[40]

		Probability of employment					
		Model 2		Model 3		Model 4	
		dP/dX	Sig.	dP/dX	Sig.	dP/dX	Sig.
Female (reference category: Male)		3.9%	0.000	3.8%	0.000	3.7%	0.000
Age (reference category: 18-24 years)	25-34	-4.9%	0.000	-4.9%	0.000	-4.9%	0.000
	35-44	-4.0%	0.000	-4.0%	0.000	-4.1%	0.000
	45-54	-6.5%	0.000	-6.4%	0.000	-6.5%	0.000
	55-64	-9.2%	0.000	-9.1%	0.000	-9.2%	0.000
Place of residence - urban / rural (ref. cat.: City)	Other urban	1.4%	0.178	1.4%	0.170	1.4%	0.174
	Mixed	-2.4%	0.000	-2.4%	0.000	-2.4%	0.000
	Rural	-0.9%	0.189	-0.8%	0.222	-0.7%	0.249
Place of residence - region (ref. cat.: Riga city)	Pieriga	2.4%	0.000	2.4%	0.000	2.4%	0.000
	Vidzeme	-3.0%	0.000	-3.0%	0.000	-3.0%	0.000
	Zemgale	-1.3%	0.035	-1.2%	0.037	-1.2%	0.044
	Kurzeme	-0.1%	0.873	-0.1%	0.914	0.0%	0.998
	Latgale	-7.0%	0.000	-7.0%	0.000	-7.0%	0.000
Marital status (ref. cat.: Single)	Married	4.4%	0.000	4.4%	0.000	4.4%	0.000
	Divorced	1.8%	0.007	1.8%	0.007	1.7%	0.008
	Widowed	-7.0%	0.000	-7.0%	0.000	-7.0%	0.000
Household size (ref. cat.: 1 person)	2	5.0%	0.000	5.0%	0.000	5.0%	0.000
	3	7.9%	0.000	7.9%	0.000	7.9%	0.000
	4	12.4%	0.000	12.5%	0.000	12.5%	0.000
	5 and more	12.8%	0.000	12.8%	0.000	12.8%	0.000
Number of kids 16 y.o. and less in the HH (ref. cat.: no kids)	1	0.1%	0.880	0.1%	0.894	0.1%	0.924
	2-3	-3.9%	0.000	-3.9%	0.000	-4.0%	0.000
	4 and more	-10.2%	0.000	-10.2%	0.000	-10.3%	0.000
Ethnicity and citizenship (ref. cat.: Latvians, LV citizens)	Non-Latvians, LV citizens	-1.4%	0.000	-1.5%	0.000	-1.5%	0.000
	Noncitizens, FSU countries' nationals	-0.7%	0.134	-0.7%	0.133	-0.7%	0.121
	Other	-2.8%	0.379	-2.8%	0.378	-2.9%	0.364
Education (ref. cat.: Basic)	Secondary	4.3%	0.000	4.3%	0.000	4.3%	0.000
	Vocational	5.4%	0.000	5.4%	0.000	5.4%	0.000
	Prof. secondary	7.9%	0.000	7.9%	0.000	7.8%	0.000
	Prof. higher	2.1%	0.332	2.0%	0.337	2.0%	0.347
	Higher	3.3%	0.372	3.3%	0.371	3.2%	0.381
	Not known	8.6%	0.000	8.6%	0.000	8.7%	0.000
Last employer before the unemployment spell (ref. cat.: Private company)	Farm / Fishery	-3.2%	0.005	-3.2%	0.005	-3.2%	0.005
	Individual or family enterprise	-0.8%	0.589	-0.8%	0.577	-0.8%	0.590
	Public institution	-5.8%	0.000	-5.8%	0.000	-5.8%	0.000
	Self employed	-2.5%	0.444	-2.5%	0.444	-2.4%	0.452
	Other	1.1%	0.588	1.1%	0.588	1.1%	0.589
	Unknown	0.2%	0.757	0.2%	0.745	0.2%	0.779
	Wasn't employed during 2005-2009	-22.3%	0.000	-22.3%	0.000	-22.2%	0.000
Health services used under the ESSN	General physician	0.6%	0.094				
	Secondary outpatient physician			0.6%	0.096		
	Secondary outpatient diagnostics					2.0%	0.000
	Home care	-12.5%	0.004	-12.6%	0.004	-12.6%	0.004
	Hoteling	-5.8%	0.000	-5.9%	0.000	-6.3%	0.000
	Inpatient care	-8.4%	0.000	-8.4%	0.000	-8.7%	0.000
	Medications					-1.3%	0.035

Notes: The sample comprises 18-64 years old persons who were registered as needy in the SOPA database for at least 3 months during October 2009 – December 2011.

[40] Authors' calculations using data provided by the Ministry of Welfare, the State Social Insurance Agency and the National Health Service of the Republic of Latvia.

Structural or cyclical? Unemployment in Latvia since 2008-09 Financial Crisis

Joint event of BICEPS, SSE Riga, and Faculty of Economics and Management of the University of Latvia

Riga, March 1, 2013

Mihails Hazans

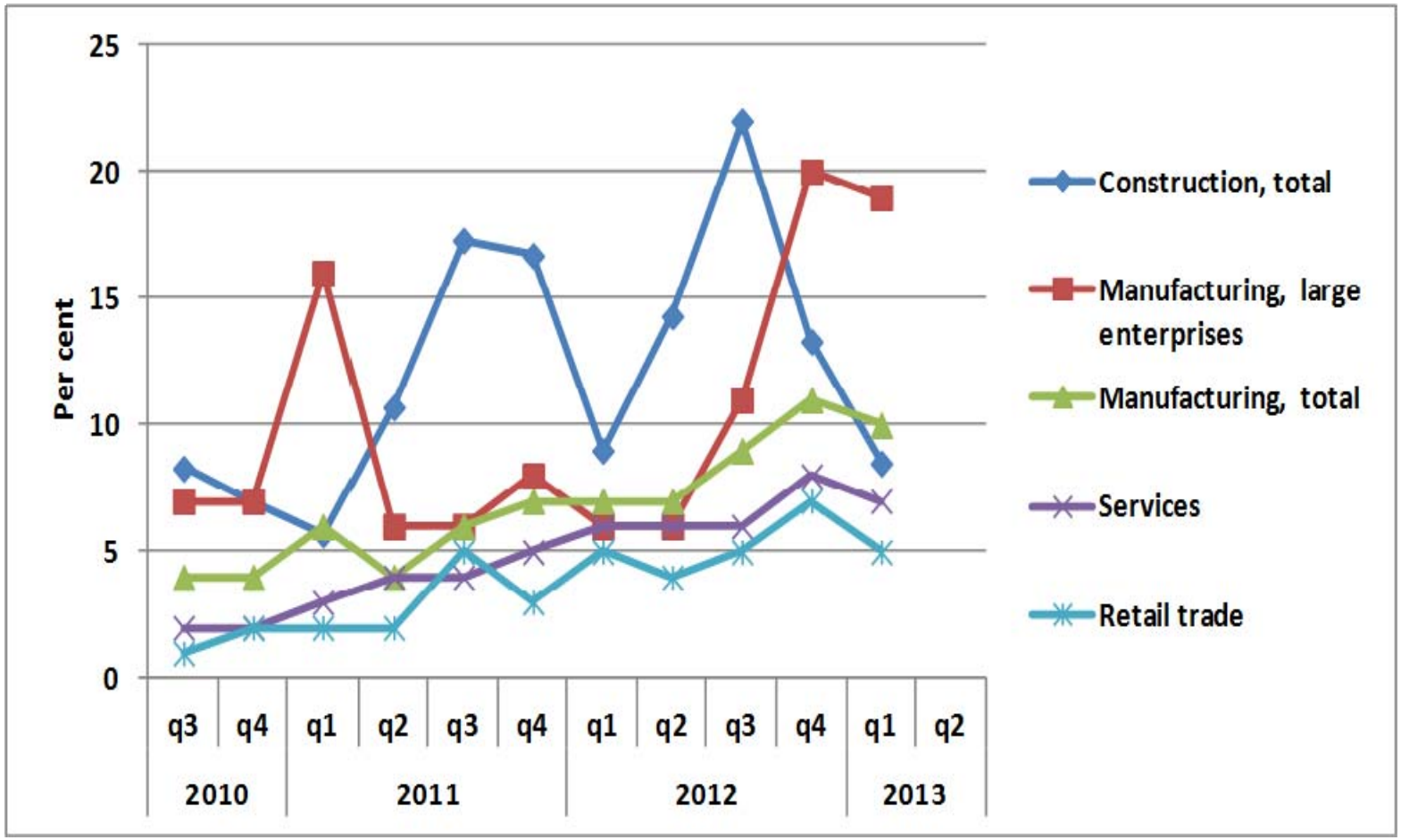
University of Latvia

Institute for the Study of Labor (IZA)

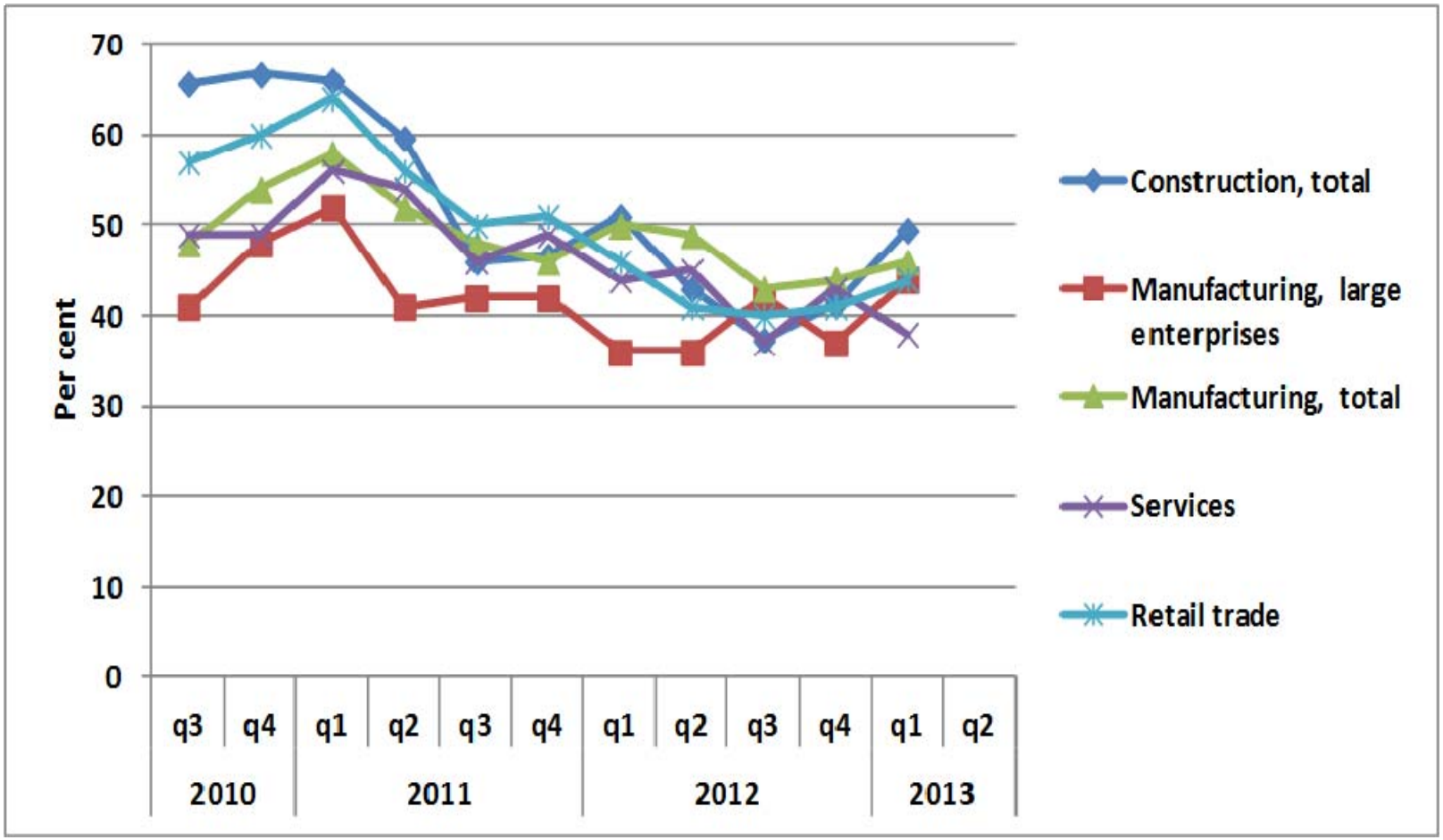
Summary

- IMF: Latvian unemployed are not suitable for the jobs Latvian employers can offer
- In the media, [some] employers complain about this as well – already since 2011
- Is it really the case? Or there is just not enough vacancies?
- I am going to show that:
- In fact, very few businesses report labour shortages
- The level of vacancies in Latvia is very low – in comparison both to the pre-crisis levels and to other European countries
- The available vacancies are filled very quickly which is not consistent with the idea of notable mismatches between supplied and demanded skills

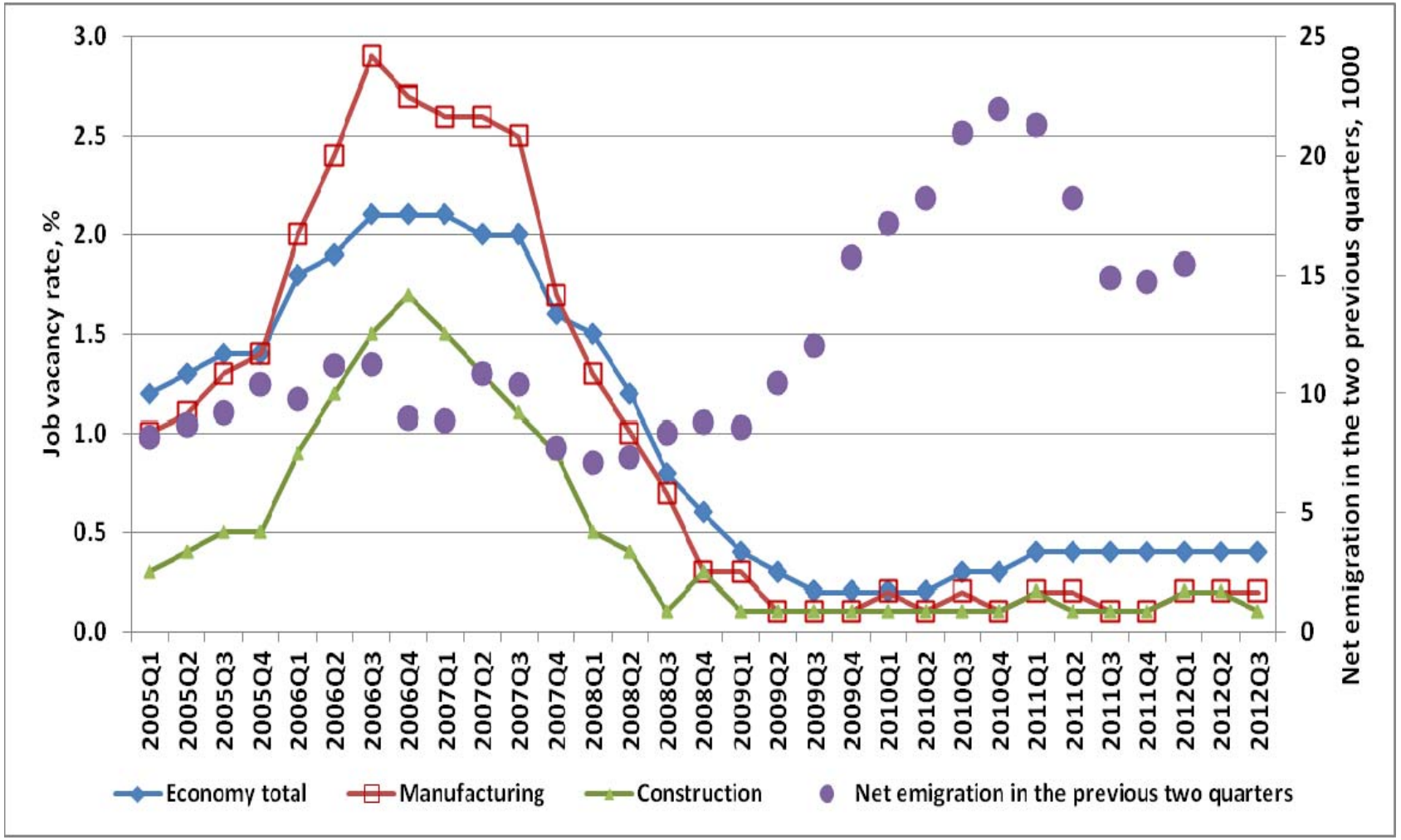
Very few enterprises report shortage of labour as a limiting factor



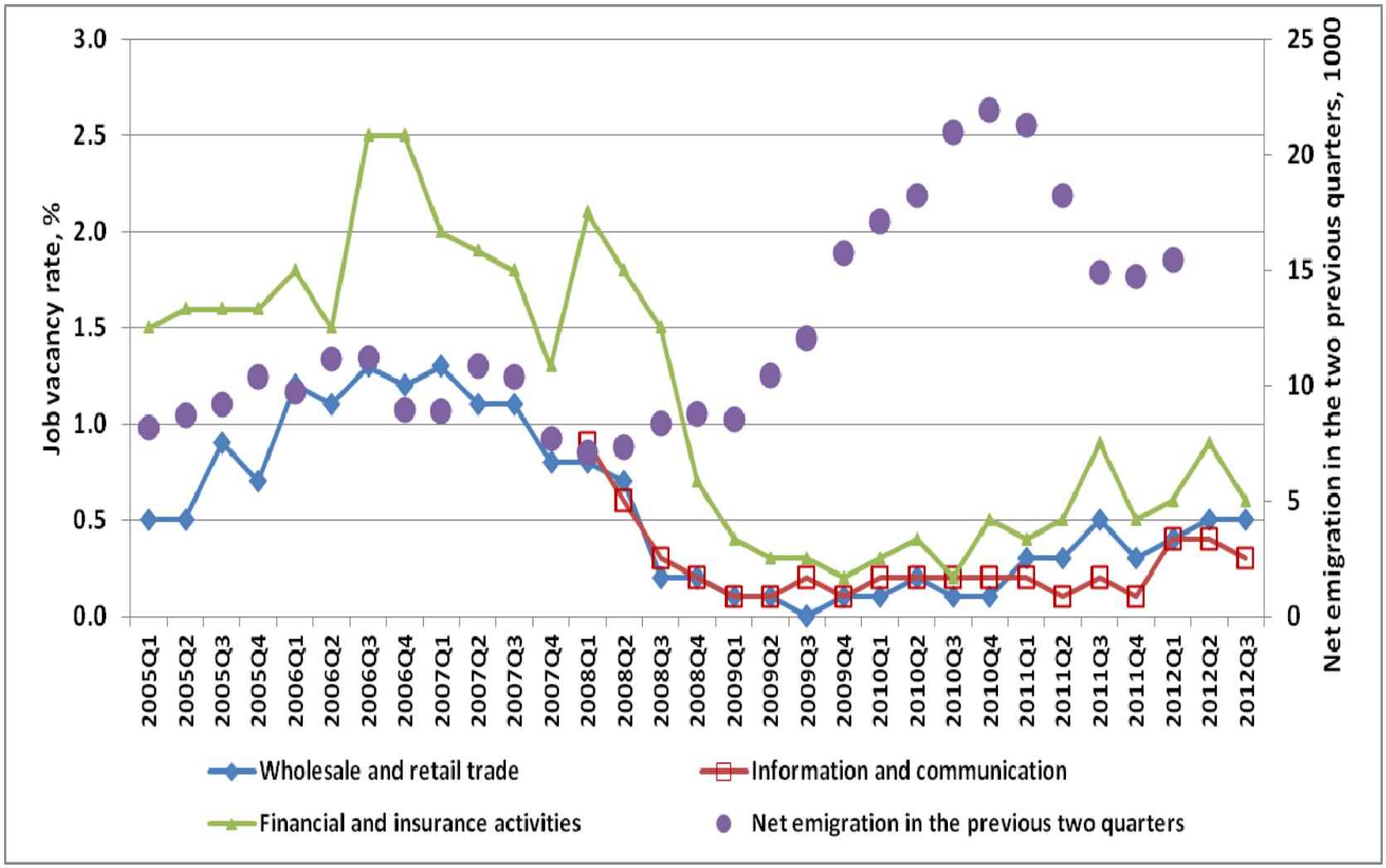
40% to 50% of enterprises in all sectors report insufficient demand as a limiting factor



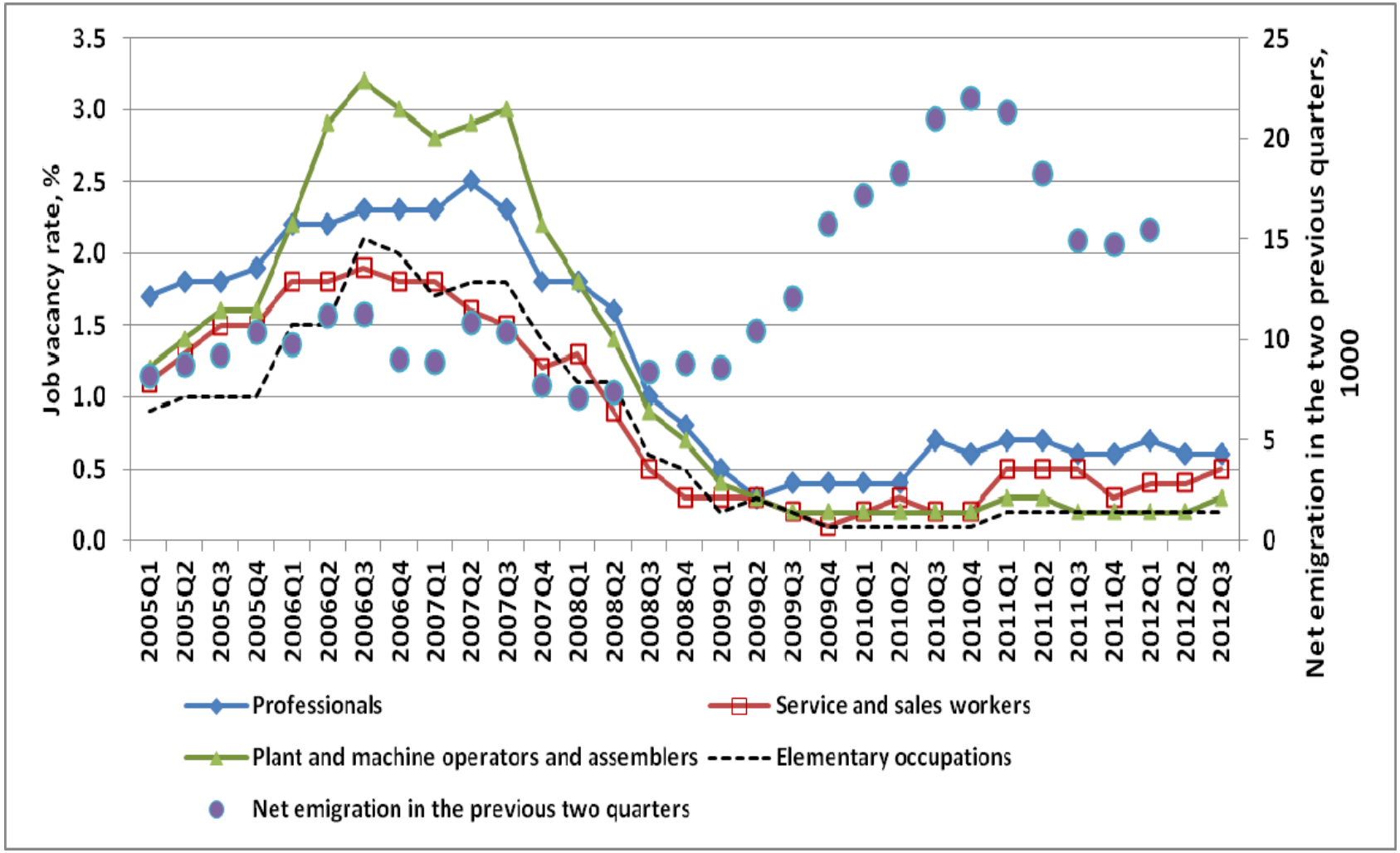
Since 2009, job vacancy rates are extremely low, even despite the need to replace emigrants



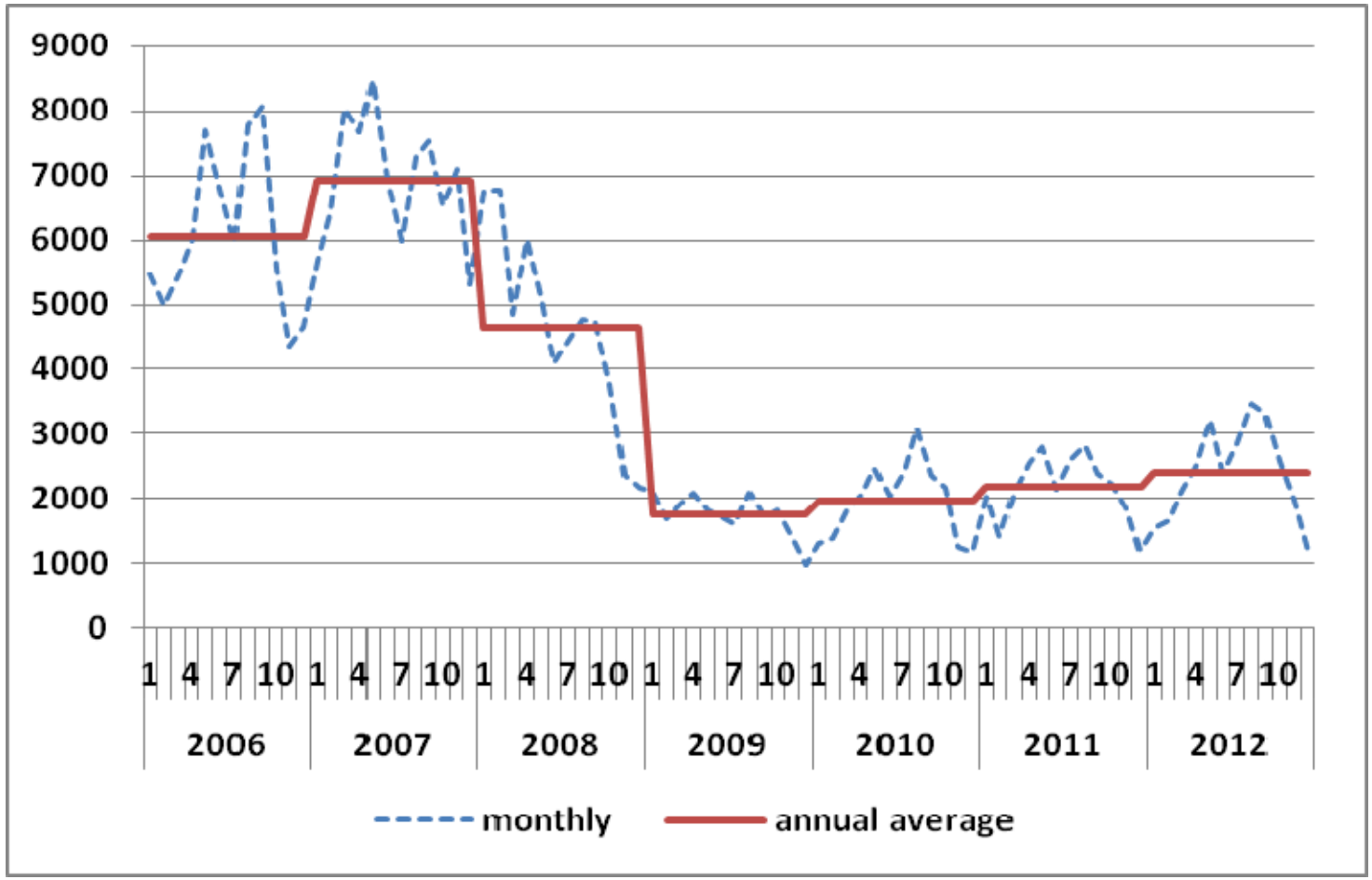
Even in such sectors as IT, Finance and Insurance, and Trade, where job vacancy rates are growing, they remain extremely low by historical standards



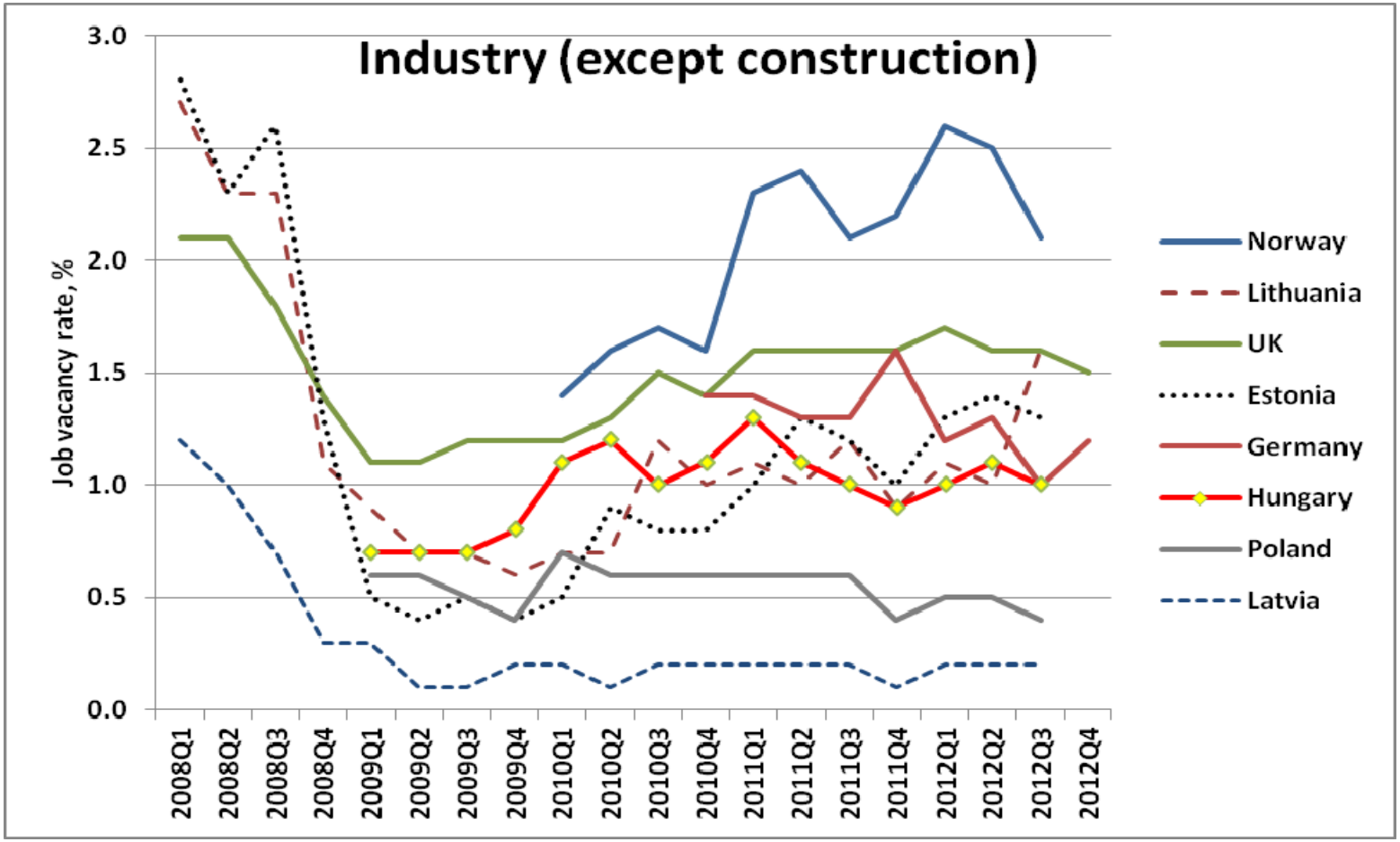
In professional occupations, vacancy rates are higher than in manual ones, but still very low and not growing



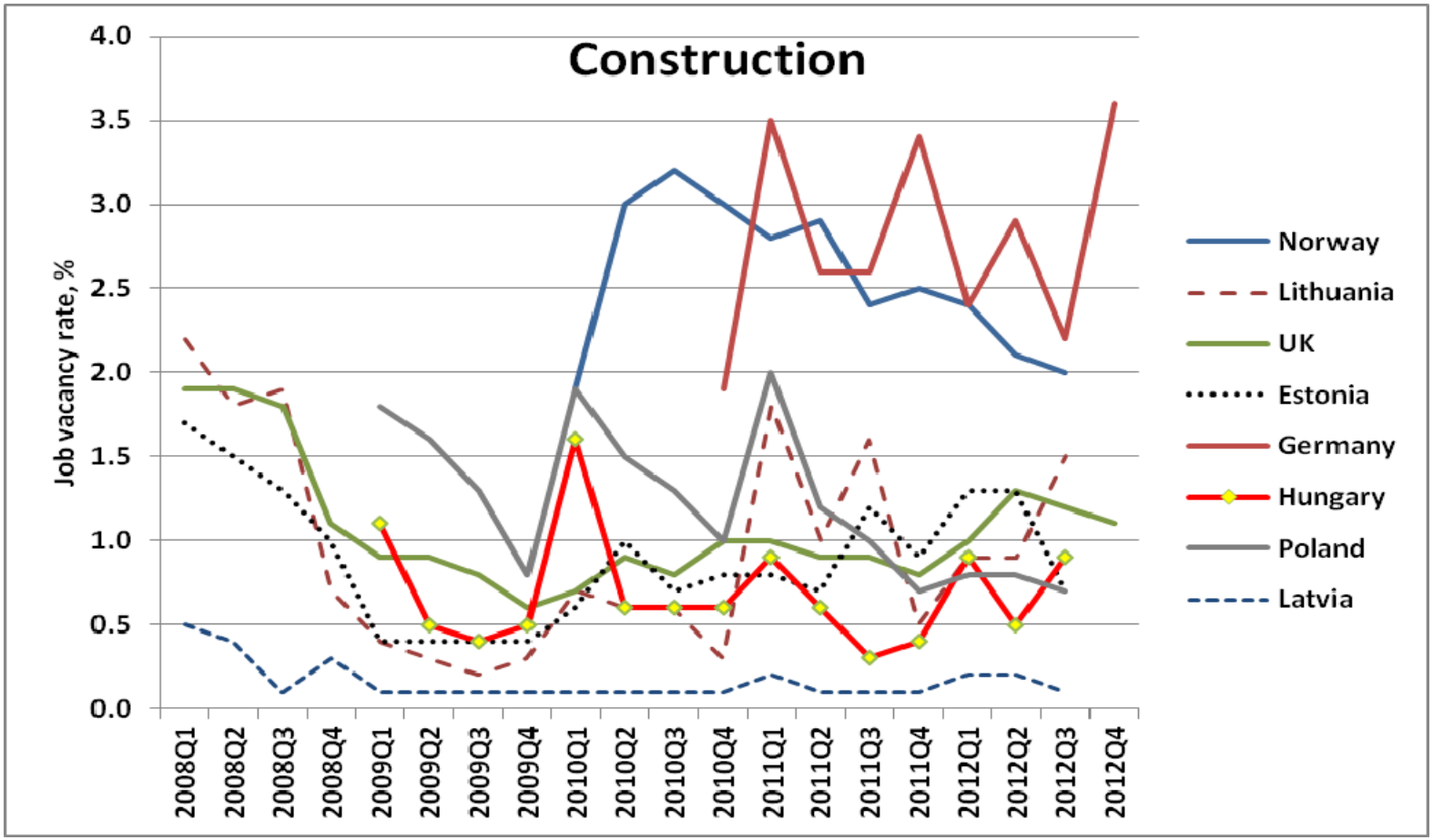
Inflow of vacancies registered at the State Employment Agency also confirms lack of demand



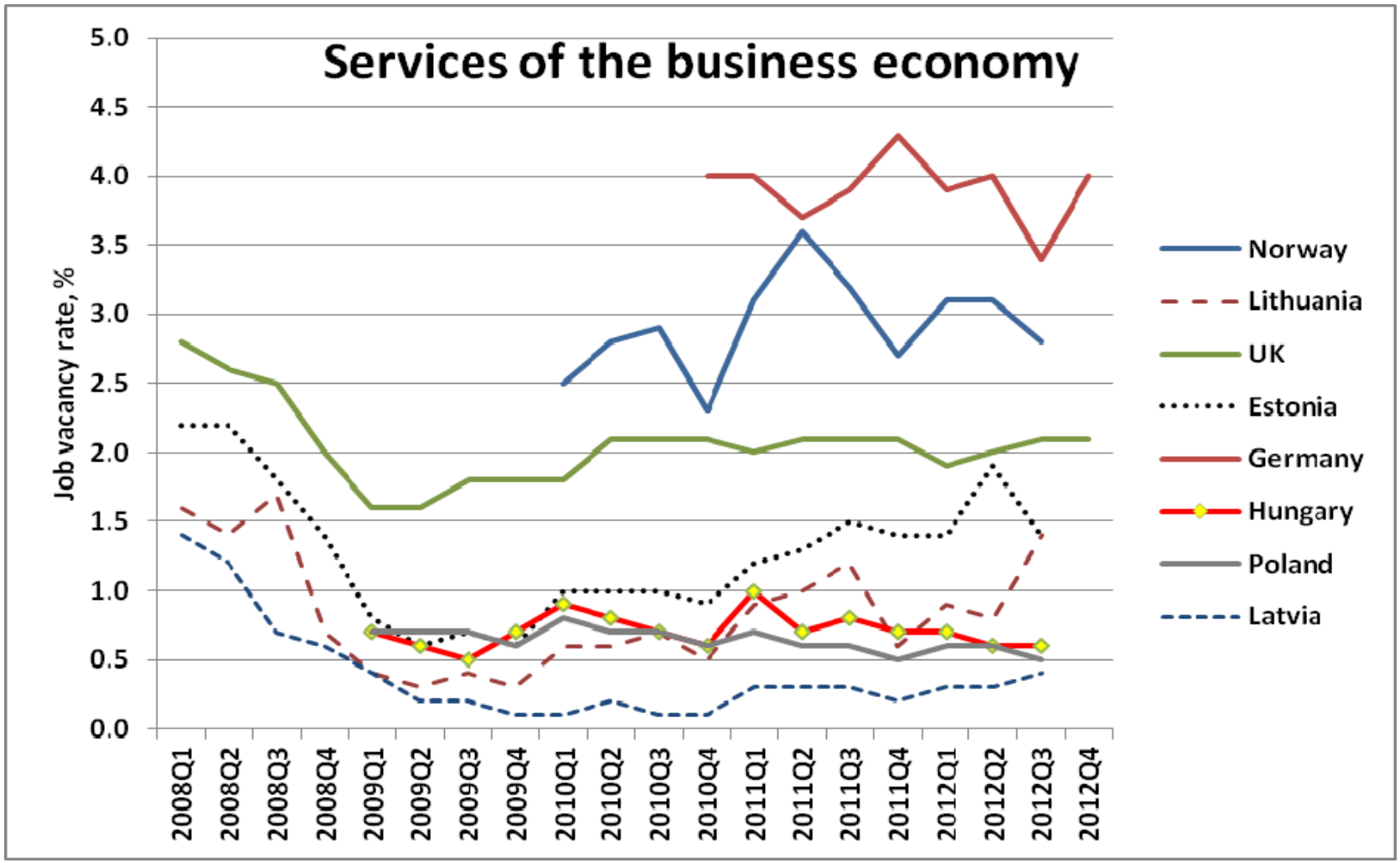
Recent job vacancy rates in Latvia are extremely low by international standards – even when compared to EE and LT



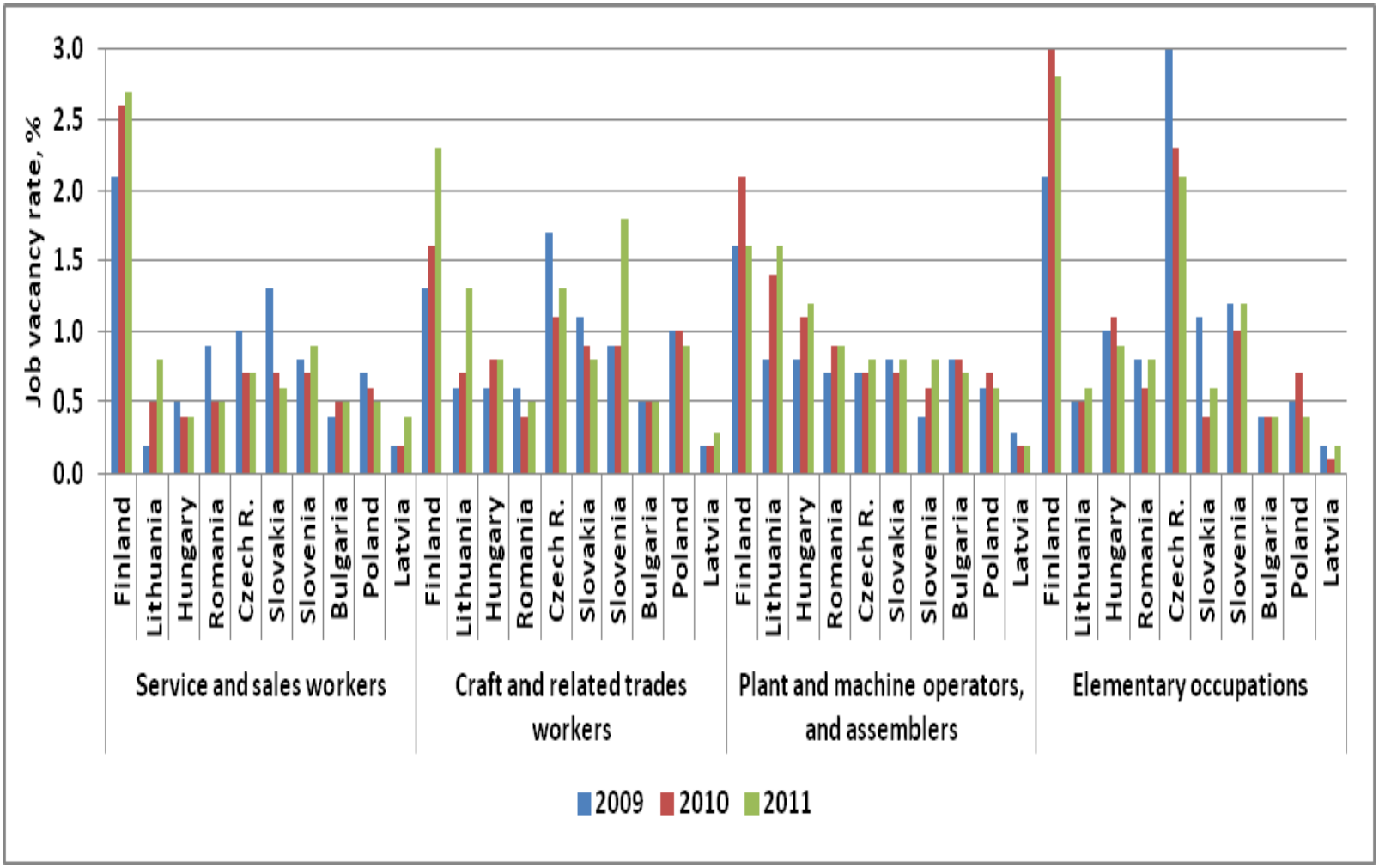
Recent job vacancy rates in Latvia are extremely low by international standards



Recent job vacancy rates in Latvia are extremely low by international standards



Across occupations,recent job vacancy rates in Latvia are extremely low by international standards



How quickly are filled vacancies registered at the State Employment Agency (NVA)? The preliminaries

		Records excluded from analysis		
	Remained unfilled	Recorded duration >180 days	Filling >10 positions at one date	
	Positions	*Positions*	*Records*	*Positions*
2008	3.4%	3.9%	2.5%	23.9%
2009	2.1%	1.6%	1.9%	20.5%
2010	5.1%	2.4%	1.5%	16.1%
2011	5.7%	2.5%	1.0%	13.2%
2012 - as of Sept. 12 (excl. active vacancies)	6.4%	0.2%	0.7%	10.0%

Job vacancy duration (days)

Publication Year	For 25% of positions, vacancies have been active for no more than ...days (p25)	For 50% of positions, vacancies have been active for no more than ...days (p50)	For 75% of positions, vacancies have been active for no more than ...days (p75)
2008	19	41	73
2009	7	19	43
2010	10	25	48
2011	14	29	51
2012 - closed	11	22	39
2012 - open	0	18	63

Job vacancy duration (days)

	2008	2009	2010	2011	2012 [a]
	Permanent jobs				
p25	20	7	11	14	12
p50	43	20	26	30	23
p75	75	44	48	53	40
	Temporary jobs				
p25	11	5	6	12	8
p50	28	13	18	26	19
p75	53	37	37	45	36

Job vacancy duration (days)

	2008			2009			2010			2011			2012[a]		
	p25	p50	p75	p25	p50	p75	p25	p50	p75	p25	p50	p75	p25	p50	p75
Senior Officials and Managers	15	32	65	10	22	44	13	24	39	15	31	47	14	23	40
Professionals	25	49	83	13	28	55	16	31	58	20	36	70	14	28	50
Technicians	23	46	76	17	36	57	16	34	56	17	33	59	13	22	38
Clerks	14	30	57	10	23	69	13	29	56	11	26	49	11	21	33
Service Workers	19	38	66	6	17	36	10	22	42	14	28	49	12	21	39
Skilled Agric. & Fishery Workers	9	33	58	6	11	31	9	23	40	13	33	60	12	24	38
Craft & Related Trades Workers	28	57	94	7	21	49	14	29	53	18	34	56	15	28	47
Plant & Machine Operators	21	45	78	5	14	34	8	24	48	13	30	53	11	26	41
Elementary Occupations	9	28	59	1	6	15	4	12	28	7	19	35	7	15	29

Average duration of open job vacancy ads at cv.lv (CV Online Latvia)

Type of job	2012 Q2	2012 Q3	2012 Q4
Administration / secretarial	21.6	20.4	20.3
Organisation and management	26.2	21.9	21.1
Construction / real estate	28.6	30.1	24.5
Culture / arts / entertainment	22.4	23.1	24
Electronics / telecommunication	24.9	26	25
Energetics / electricity	23	23.3	22.8
Finance / accounting	24.1	20.7	19.9
Health care / social care	25.2	24.7	25.2
Production / manufacturing	24.6	25	24.2
Information technology	29.9	26.1	26.6
Media / public relations	20	22.2	18.6
Law / legal aid	19.4	25.4	20
Marketing / advertising	21	22.2	20.6
Technical engineering	27.1	24.8	26.1
Sales	21.5	23.3	21.4

Average duration of open job vacancy ads at cv.lv (CV Online Latvia)

Type of job	2012 Q2	2012 Q3	2012 Q4
Agriculture / environmental sciences	21.7	22.4	20.8
Service industry	23.9	23.2	22.2
State and public administration	21.1	20.8	19.8
Tourism / hotels / catering	38.8	25.2	27.5
Trade / purchase / supply	21.4	22.2	21
Education / science	27.2	25.3	22.6
Transport / logistics	28.1	23.3	24.2
Banking / insurance	25	21.6	17.6
Human resources	19.2	23.7	18.6
Security / rescue services	32.8	24	20.4
Voluntary job	97	19	20
Internship	24.4	22.6	20.2
OVERALL	27.4	23.4	22.0
Total job ads posted	*8716*	*10554*	*10534*

Thank you!

- Acknowledgement:
- I thank Alexander Tarvid for research assistance
- I thank NVA (in particular, NVA director Inese Kalvāne, as well Santa Jūrkalne and Ilze Bērziņa) for NVA vacancy data
- I thank CV-Online Latvia (in particular, Arnis Šķēls) for vacancy data from cv.lv